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Kosovo Business Support (KBS) Project

AGRIBUSINESS COMPONENT

WORK PLAN

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ACRONYMS

ABK	American Bank of Kosovo
BDS	Business Development Specialist (KBS staff)
KASS	Kosovo Agricultural Sector Support program
KBS	Kosovo Business Support project
KFS	Kosovo Farmer Support project
GoK	Government of the Kosovo
MAFRD	Ministry of Agriculture, Forestry and Rural Development
MCC	Milk Collection Centers
ORM	Operation Review Meetings
RMs	Relationship Managers (KBS staff)
SC	Save the Children
SME	Small and Medium Enterprise
SOE	Socially Owned Enterprise
USAID	United States Agency for International Development

SECTION I. EXECUTIVE SUMMARY

KBS Agribusiness component objectives

The overall objective of the agribusiness component of the KBS project is to assist targeted agribusiness clusters, in an integrated manner, to enhance the competitiveness of finished products in domestic and export markets. This objective will be achieved by developing firm management capabilities, increasing operational efficiency, facilitating consumer awareness campaigns, quality assurance programs, branding, and other market oriented activities.

Agribusiness competitiveness assessment

The agribusiness competitiveness survey conducted by the contractor included 850 respondents which together constitute a representative sample of all agribusinesses in Kosovo. The survey included producers (e.g., poultry, mushrooms, honey, etc.), processors (e.g., dairy, meat, feed, flour, fruit, vegetable, wood, etc.), food commodity wholesalers, and retail companies. Based on these findings we have proposed a cluster approach to agribusiness competitiveness development.

The survey contained the following sections and question categories:

General information: General findings include such topics as social responsibility, environmental issues, and views of the respondents on the economy, their view of the future, general business information, and borrowing and finance.

Factor conditions: Factor conditions included questions on raw agricultural material, problems with raw materials sourcing, inputs (chemicals, etc.), assistance from suppliers, and source of information on technology, source of primary job skills, land ownership, technology, infrastructure, investments, human resource, and natural resources.

Demand conditions. Demand conditions included marketing, export constraints, primary customers, market knowledge, products, market location, and export markets.

Supporting industries conditions. Questions included issues related to transportation, financial institutions, input suppliers, academic institutions, and clustering.

Firm strategy conditions. This section includes questions on firm strategy, management strengths, marketing and pricing, direct and indirect distribution channels, market assistance, business deficiencies, competitive advantage, business opportunities, competition, investment plans, and company performance.

Government related conditions. Includes questions on government assistance, main policy issues, areas desired of government assistance, government departments, and satisfaction with government.

Chance related conditions. This section includes questions on risks today, economic stability, and business risks.

Sub-sector selection

The rationale for recommending specific sub-sectors was based on the following principals:

1. Potential of the sub-sector to capture domestic market share and thus contribute significantly to import substitution.
2. Linkages between agribusiness processors and farm producers are extensive and thus provide the greatest opportunity for growth and expansion of the agricultural sector.
3. The proposed sub-sector development strategies are to an extent under way, thus the project is not trying to create new industries, but rather facilitate the development of agricultural systems that are already evolving.
4. The processing capacity of most existing agribusinesses is under utilized, and thus the need for extensive investment in new equipment will be minimized.
5. An organizational structure in the form of an association exists for most of the recommended sub-sectors.
6. Potential synergies amongst sub-sectors (e.g., feed with dairy and poultry)

Approach to agribusiness component implementation

The sub-sector development approach proposed here begins with an understanding of the current market situation for the primary products produced by the sub-sector. Understanding market dynamics allows for identification of opportunities for sub-sector participants to develop their markets – increase market share. The agribusiness assessment (broad based and sub-sector specific) have provided insights on the major constraints to agribusiness development. Then, with market knowledge and an understanding of major constraints in hand, project implementers will work with selected sub-sector clusters on the development of a strategy that defines goals and objectives for the cluster. The primary goal of all sub-sector strategies will be market development, that is to say, to create demand for specific products. However, market development activities will proceed in parallel with technical assistance to cluster participants in management strengthening, operational efficiency, marketing, quality and branding, and trade and investment.

A sub-sector cluster is defined here as a geographic cluster of firms oriented around a central processing facility (the primary intervention vehicle for project implementation). For example, in a given municipality the dairy cluster would be comprised of a dairy processor, veterinarians, input suppliers, milk assembly firms, and milk collection centers. There will be multiple dairy clusters located throughout Kosovo, each formed around a primary milk processor.

There are USAID/Kosovo supported associations that can become an additional focal point for implantation activities. They are the emerging Dairy Association, the established Poultry and Feed Association, and Input Suppliers Association. The agribusiness team will form within the respective association and with the participation of the associations, a working group as a point of contact for the association. Membership in all working groups will be multidisciplinary which is consistent with the integrated approach to cluster development. For example, the

membership of the working group of the Dairy Association will include milk processors, veterinarians, input suppliers, and milk collection firms.

The KBS agribusiness team is also recommending that the fruit and vegetable, and specialty products sub-sectors be considered for technical assistance. The Drini Valley Vegetable Producers Association (Anadrini) will be the focal point for the fruit and vegetable working group. The Kosovo Export Association will be the best vehicle for forming a working group for the specialty products cluster. The working group for the Meat and Leather cluster will be organized by entrepreneurs interested in collaborating with the KBS agribusiness team on implementation activities. It is understood that there is an emerging meat producers and processors association. The situation on the evolution of this association will be monitored closely and an assessment of their viability determined.

Sub-sector strategies

1. Dairy cluster

The approach to dairy cluster development in Kosovo is characterized as integrated throughout the value chain (including allied industries) and places initial emphasis on creating demand for quality dairy products. Market development in parallel with quality improvements in milk production and processing are essential to the approach.

Dairy development assistance by the Agribusiness team will services through three main activities:

Consumer Marketing and Promotion. Increased demand for dairy products through educating and encouraging milk and dairy product consumption at the consumer level.

Quality Value -added Processing. Increased profitability for processors in the form of improved quality products commanding higher market values in the domestic market and effective “BRANDING” campaigns to promote the consumption of milk;

Increased Production of High Quality milk. Increase the production of high quality milk through training in proper milking and milk handling practices, storage and transportation of milk. Increase the production of high quality milk through the appropriate use of artificial insemination, high protein feed concentrates, proper veterinary medications and farm financial management;

2. Poultry, feed, and oil seed cluster

KBS agribusiness team will develop poultry producer strategies that will focus on operational efficiency objectives, bio-security and vaccination programs, feeding programs, and marketing of products. Table egg producers require a source of healthy laying stock with specific genetic capabilities, quality feed, medications, reliable energy sources, and markets for their products. The KBS approach begins with the development of an agreed upon strategy that aims at integrating poultry producers and allied industries in order to mitigate constraints in factor conditions, demand conditions, and cluster development.

The integrated approach of the poultry cluster includes assisting feed millers with market development of high quality feed products. This will be accomplished by demonstrating returns to table egg producers (based on actual experiences in Kosovo) from the investment

made in properly formulated complete feeds and feed concentrates. Similarly, veterinarians will develop, with US volunteer assistance, bio-security and vaccination programs. Input suppliers will demonstrate practical solutions to packaging, the value of improved genetic stock, and the use of appropriate technology.

3. Fruit and vegetable cluster

The focus of the fruit and vegetable strategy will be on import substitution where the key intervention target being the fruit and vegetable processors. Any import substitution strategy must be developed within a future export market approach. Specific products with comparative advantage in the regional/European area that can compete in price and quality must be identified and produced. Any investment in the fruits and vegetables sub-sector has to take into account the necessity of integration of the food chain for these specific products. KBS can assist in supporting the agri-business in each step of the production and processing chain in securing credit, obtaining reasonable access to high quality inputs for agriculture producers and processors, training in classification, grading and labeling of produce, identifying new marketing opportunities, improving processing efficiency and productivity. KBS can assist the processor or farm group to evaluate if the products should be sold mainly as fresh or processed product in order to be sure that the product is going into the most profitable marketing channel.

Domestic market development is critical for the future of the Kosovo fruit and vegetable sector. The KBS project will assist and advise clients on developing products for the specialized markets, extending production seasons, introduction of new crops and application of new technology. In order to take over the early and possibly some of the late season market it is necessary to think in terms of protected cropping. Using various new technologies for extending the season it is possible to think in terms of capturing up to 6 weeks of the early market for fresh vegetables. It should also be possible to extend the late season produce for a period of weeks but this poses different and more difficult problems compared to those of the early season market.

Also, a totally new approach to the market is recommended, whereby the early, main and late seasons are specifically targeted through the choice of type and variety of fruit. In addition the process markets should be targeted at specific varieties of fruits for the preserve, juice, and cider markets. KBS agribusiness team will develop strategies that will focus on improving management and marketing of horticultural products. The KBS approach begins with the development of an agreed upon strategy that aims at integrating fruits and vegetable producers and allied industries in order to mitigate constraints in factor conditions, demand conditions, and cluster development.

The integrated approach of the produce cluster includes assisting input suppliers with market development of high quality inputs and seed products. This will be accomplished by demonstrating returns to producers using high quality seed and inputs. KBS will assist input suppliers to demonstrate practical solutions to packaging problems, the value of improved plant varieties, and the use of appropriate technology for production and processing. Demand for produce will be developed through an improved market distribution strategy. This approach will integrate allied industries to help producers overcome constraints in factor conditions and increase important information flows through collaboration.

Quality Improvement Strategy

The survey of the green markets indicated that the level of prices for locally produced produce is competitive compared to imports, however, imports are generally of higher quality. The majority of Kosovo's produce is harvested and brought to market with only a limited amount of sorting and grading. There is also limited packaging of the produce in ways that would add value, reduce post-harvest damage and preserve shelf life. The lack of post-harvest handling and infrastructure, such as simple pre-coolers, cool rooms, and consolidation points, packing houses, nut hulling and shelling plants, are also constraints. In the nut business the limited supply of raw materials makes the feasibility of financing the fixed capital cost of a processing plant difficult without contracted sources of supply. KBS will be working with the agri-processing sector to eliminate these constraints by providing technical and business management assistance.

Agro-Processing Development Strategy

Processors must increase efficiency of processing and the farmer must decrease production costs. Both these are very obtainable objectives given assistance by KBS and the grants program. Decreasing the costs of production at the processor level can be done by improving processing line layout, using correct processing procedures, and improving the varieties of vegetables that the processors are buying from the farmer. To dramatically improve yields and reduce the manufacturing costs, Kosovo's vegetable processors should be encouraging the local farmers to plant more appropriate varieties. This can only be done by entering into contracts with the farmer guaranteeing them a fixed price for a specific quality of processing tomato. KBS will work with the processor to determine how the contract should be structured, how many farmers will participate, what the costs are for processing and the price that can be guaranteed to the farmer. The KFS through the grant program can help the farmers test new varieties that meet these grading standards and produce the highest yields with the lowest production cost.

Seeds and Plant Breeding Strategy

Farmers are presently constrained by the lack of good quality seed supplies. Farmers generally know of the value of good seed obtained outside of Kosovo and are willing to pay a premium for good quality seed. However, buying the imported seeds is subject to the import taxes placed on imported farm supplies. Unless the import tax laws on farm supplies are relaxed, Kosovo farmers will continue to operate at a disadvantage compared to farmers' of neighboring countries. KBS will assist local nurseries to work with international seed companies to contract local companies to produce high value seeds.

Seed Potato Strategy

There is a demand in Kosovo for potato seed. This is a special crop that demands hygienic growing conditions, special care and cultural knowledge. The main prerequisite is a land free from the peach-potato aphid, a main vector for various viral diseases and freedom from various eelworm pests. KBS can help input suppliers locate providers of seed potatoes from other countries that are certified disease free and the highest yielding for this climate and soil conditions. These seed potatoes can be used to start the seed potato industry here. Further, KBS will provide specialists to assist the input suppliers to put in place certification procedures for the seed potato growers to ensure that they are providing disease free seed potatoes. KBS

will then help assist agricultural input suppliers to locate local certified seed potato growers to sell to the market they service.

The Nursery Stock Industry Strategy

The nursery stock industry is the least developed of all sub-sectors of the horticultural sector. Nevertheless, the immediate future of this industry probably holds greater growth potential than either fruit or vegetables. Up to 2001, the farms have been growing a small selection of decorative dwarf conifers, some fruit stock mainly grafted on seedling stock and some popular annual flowers. KBS will help develop this sector by providing the business with information and contacts in Europe and America. Market development activities will be conducted by the KBS staff with the assistance of volunteer consultants specializing in the nursery stock industry.

Winter Vegetables Strategy

Introduction of new high yielding winter crops, new disease resistant varieties, and seasonal use of protective cropping technologies can increase winter vegetable production. The implementation of special processes to fill the winter period against the importation of seasonal production from the south can be done with proper assistance. BS can help input supply companies to find vegetables that fit the criteria for sale to the farmers. Further, they can provide consultants that can assist the input suppliers to teach the farmers to plant and cultivate these crops using their inputs. Further, basic market development can be done by the wholesalers of such vegetables with the assistance of KBS.

SECTION II. INTRODUCTION

The agribusiness component of the KBS project is one part of the Kosovo Agricultural Sector Support (KASS) program. Technical assistance activities under the agribusiness component will complement the Kosovo Farmer Support (KFS) activity by ensuring weaknesses in the value chain of targeted agricultural sub-sectors are addressed. Ideally, development activities planned by KFS will be consistent with an integrated development strategy for the sub-sector or geographic clusters of agribusinesses and their local producers. Key to the success of the KASS program will be the development of holistic strategies for sub-sectors, targeted assistance to relieve constraints up and down the value chain, consistent coordination between implementers, and monitoring/evaluation of each component of the KASS program.

1. Agribusiness Component Purpose

The primary purpose of the agribusiness component of the KBS project is to enhance the competitiveness of the agricultural sector by increasing demand for locally produced products, targeting import substitution, and increasing export activities.

2. Component Objectives

The overall objective of the agribusiness component is to assist targeted agribusiness clusters, in an integrated manner, to enhance the competitiveness of finished products in domestic and export markets. This objective will be achieved by developing firm management capabilities, increasing operational efficiency, establishing consumer awareness campaigns, quality programs, branding, and other market oriented activities.

3. Sub-sector selection rationale

The contractor was tasked with proposing five priority sub-sectors in order to target technical assistance under the KBS project towards those agribusinesses that can contribute the most to agricultural development in Kosovo. The process used by the consultants included a comprehensive survey and extensive interviews.

Guiding pillars in the selection process included:

1. Potential of the sub-sector to capture domestic market share and thus contribute significantly to import substitution.
2. Linkages between agribusiness processors and farm producers are extensive and thus provide the greatest opportunity for growth and expansion of the agricultural sector.
3. The proposed sub-sector development strategies are to an extent under way, thus the project is not trying to create new industries, but rather facilitate the development of agricultural systems that are already evolving.
4. The processing capacity of most existing agribusinesses is under utilized, and thus the need for extensive investment in new equipment will be minimized.
5. An organizational structure in the form of an association exists for most of the recommended sub-sectors.

6. Potential synergies amongst sub-sectors (e.g., feed with dairy and poultry)

The agribusiness competitiveness survey conducted by the contractor included 850 respondents which together constitute a representative sample of all agribusinesses in Kosovo. The survey included producers (e.g., poultry, mushrooms, honey, etc.), processors (e.g., dairy, meat, feed, flour, fruit, vegetable, wood, etc.), food commodity wholesalers, and retail companies. Based on these findings we have proposed a cluster approach to agribusiness competitiveness development.

For example, the proposed dairy cluster is composed of fluid milk processors, veterinary services, input suppliers and wholesalers of dairy products. The survey included 80 respondents from within the proposed dairy cluster. The poultry, feed, and oil seed cluster included 74 surveys from within the cluster. Similarly, the meat and leather cluster included 91 respondents, specialty products included 48 respondents, and wholesale of inputs 42 respondents. This means that if the survey is representative of the entire agricultural sector we are targeting over 51% of the existing agricultural sector.

The major sub-sectors not recommended by the consultants are wood processing, flour milling, wine, beer, bottled drinks, bakeries, retail stores, textiles, coffee roasting, and confectionary. These excluded sub-sectors comprised 49% of the survey respondents. The primary reason for not targeting the wood industry (117 respondents) was their limited linkage to primary agriculture production. The consultants do recognize that wood processors do have considerable export potential. Flour milling and bakeries (109 respondents) as a cluster was considered, but not recommended because of their limited ability to contribute to sustainable agricultural development. That is to say, that small scale wheat production and localized flour milling is a food security issue related to cultural experiences over time. Also, as an extremely competitive commodity in global markets wheat produced in Kosovo has no chance to grow. Furthermore, as other more important opportunities arise for small-holder land use (e.g., feed grains, oil seeds, specialized crops, etc.) there will be a shifting away from wheat based production.

When we remove the SOE from the list of potential clients (wine, beer, textiles, some wood processing) the universe of other possible sub-sectors is quite small. There are two important reasons for proposing a specialty products cluster: 1) many such firms hold export potential, and 2) if there are individual private firms that fit the overall selection criteria, they can be included in KBS agribusiness activities.

In conclusion, when you remove the wood processing, flour milling, retail stores, and textiles from consideration as targeted sub-sectors, the proposed cluster approach includes nearly all other agribusiness sub-sectors in Kosovo.

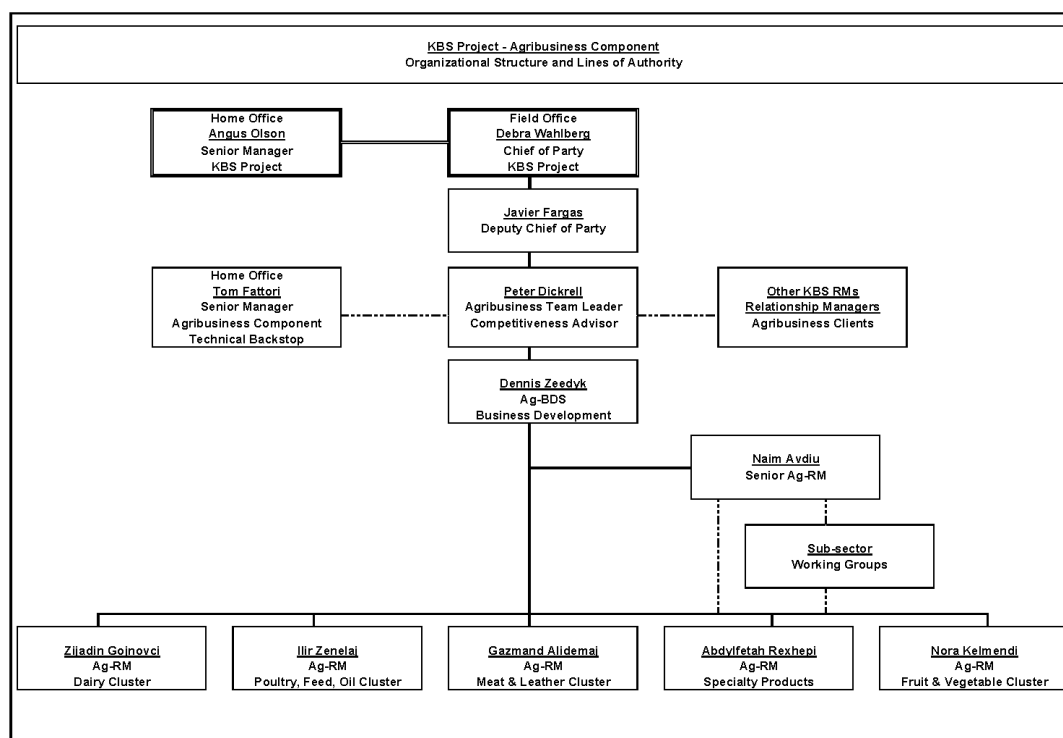
SECTION III. ORGANIZATION AND ADMINISTRATION

1. KBS project offices

- a. Pristina office. The agribusiness team will be located in Pristina and provide technical assistance from the KBS base of operation. All activities will be coordinated with the Pristina office and KBS offices in Zvecan and Strpce to ensure timely and quality services.

2. Staffing plans (see organizational chart)

- a. Agribusiness Competitiveness Advisor, Peter Dickrell
- b. Agribusiness Development Specialist and BDS, Dennis Zeedyk
- c. Senior Relationship Manager, Naim Avdiu
- d. Relationship Managers:
 - i) Dairy cluster: 1. Zijadin Gojnovci,
 - ii) Poultry and feed milling cluster: 2. Ilir Zenelaj
 - iii) Meat and leather cluster; 3. Gazmand Alidemaj
 - iv) Fruit and vegetable cluster: 4. Nora Kelmandi
 - v) Specialty food products cluster: 5. Abdylfeta Rexhepi



3. Roles and responsibilities of Relationship Managers (RMs).

- a.** Managing relationships with clients; providing business development services, ensuring compliance with developed strategies, and coordination with KFS activities.
- b.** Organizing training and providing consulting services in:
 - i)** Managerial and financial reporting (accounting training and systems installations)
 - ii)** Marketing and strategic business plans
 - iii)** Firm level action plans (customized for agribusinesses) and
 - iv)** Operational review meetings (ORMs)
- c.** Coordinating trade and investment activities with the KBS T&I team.

The KBS trade and investment team is planning an Agribusiness B2B roundtable for Tirana, probably at the end of October. This would be a three country (Kosovo, Albania and Macedonia) event. In addition the team has two major regional B2Bs planned, one in Ohrid, Macedonia and the other in Kaponik Serbia, both of which should be strong in agribusiness companies from throughout the region.

International Organizations Procurement Awareness Day (IPAD)

The international community is a major component of the Kosovo economy. Therefore, in an attempt to gain access to the procurement processes of the International Organizations/NGOs (IO/NGO), KBS will organize an IO/NGO Procurement Awareness Day (IPAD). Besides taking advantage of the vast IO/NGO presence in Kosovo and increasing sales to the IO/NGO systems, the IPAD will offer local businesses the opportunity to learn how to navigate these often Byzantine procurement systems. For this combination seminar/B2B, KBS will prepare the agenda and letter of invitation to the IO/NGO representatives, organize the event, and prepare companies and industry representatives prior to the event.

To make this program on-going, we will work with the IO/NGOs to create a process whereby they will disseminate all procurement opportunities to KBS so that we can deliver these to our clients. We will also establish a registration process in which our companies would “register” to become part of this program. By registering, they would be made aware of all procurement opportunities received by KBS. As KBS comes to a close, we would turn over this activity to a relevant association or other business organization (perhaps the Chamber of Commerce or Euro Info Center).

Besides helping our clients learn how to access this important market, companies will:

- ~~///~~ Learn how to professionally present their manufacturing capabilities to IO/NGO buyers;
- ~~///~~ Learn about IO/NGO procurement requirements in order to prepare themselves to bid on IO/NGO procurement;
- ~~///~~ Develop relationships with IO/NGO agencies and buyers in order to effectively compete for, and win, IO/NGO bids in the future

The objectives of this event for International Organizations will be to:

- ~~///~~ Learn about the competitive manufacturing capability of Kosovar industry;

- ✍✍Transparently disseminate procurement requirements to a wide swath of qualified suppliers to ensure proper adherence by the Kosovar companies when preparing and submitting bids to IO/NGOs;
- ✍✍Develop relationships with Kosovar industry in order to more broadly offer bidding opportunities.

Food Industry Day

To strengthen the food industry within Kosovo and target import substitution opportunities, KBS will hold a Food Industries Day. This event will bring together key government officials, producers, retailers, wholesalers and others throughout the industry. This event will be a one-day (combination seminar, trade fair and B2B) for the specific purpose of expanding the marketed production of locally produced products in the local market. This program will be designed to:

- ✍✍Facilitate a dialogue between the private and public sectors on regulatory and licensing issues that constrain local market expansion,
- ✍✍Consummate immediate and future purchases of products made in Kosovo, and
- ✍✍Assist producers in Kosovo to integrate their marketing through the joint distribution of complementary products.

To facilitate local market development of the Food Industry the KBS Trade and Investment Practice would work with the newly formed KBS Agribusiness Practice, IFDC and other appropriate organizations, to plan and implement the first Kosovo Food Day. As an adjunct to this activity, it is recommended that KBS undertake a survey of schools, university, government offices and retail shops to learn what they buy from Kosovo food companies and more importantly, why they don't buy food products from Kosovo companies and how we can break through this market barrier.

4. Cooperation with other donor funded projects.

a. Save the Children Grants Program.

The Kosovo Farmer Support activity will be implemented through an umbrella grant to Save the Children (SC). Under this activity, eligible grantees will submit proposals for grants that will increase the production capacity, efficiency, and quality of agricultural commodities. Grantees will be largely associations, NGOs, and other forms of private organizations.

b. Authority on grants selection issues.

The selection of grant proposals for funding will be wholly conducted by Save the Children. The KBS Agribusiness team will assist Save the Children by providing information on the agri-processing sector. The KBS team will play an important role in providing information to assist SC in the evaluation of the technical and financial viability of individual grant proposals. For example, priority should be given to those proposals that demonstrate clear linkages to agribusiness clients of the KBS activity and thus add significant value to the KASS program.

c. Coordination with donors.

The KBS Agribusiness team will establish a list of donor activities that are supporting the agriculture sector in Kosovo. The Team will also determine if opportunities for collaboration

or the creation of synergies amongst programs exist, and if so, will make recommendations to USAID/Kosovo on possible courses of action.

SECTION IV. AGRIBUSINESS COMPETITIVENESS ASSESSMENT

The following findings were derived from the agribusiness competitiveness assessment data set of 850 respondents.

1. Entrepreneur-identified general information

General findings: Average number: 12 years in business; 10 full-time workers; 13 full-time employees are expected next year (9 male and 4 female) with 13 part-time workers; 30% have at least one computer; 11% have access to the internet; 21% are members of an association; 36% are based on or own farm; 54% are located in urban or sub-urban area; 46% are located in a town/village and in rural areas; 44% started business from scratch; 44% took over a family business; and 85% are classified as a personal business enterprise.

Social responsibility: More than 75% of the respondents provide childcare, meals, transportation, and minor medical payments on average or above average. 51% do not provide education and training.

Environmental issues: 40% of the respondents do not use energy conservation methods or keep environmental records; 48% dispose of solid waste themselves; and 45% have received environmental or health/veterinary fines.

View of the economy: 42% view the economy as growing moderately and 34% view the economy as staying stable.

View of the future: 53% view sales next year to be average; 60% view the economy next year as average; and 73% view the quality of their product next year to be above average.

General business information: It takes 2-3 days to clear products from customs; 10 days to register their business; On average they invested 47,674€ in 2001 and 36,988€ during the first seven months of 2002 (note higher rate of investment); 52% own land and 12% lease land; 60% own buildings and 22% lease buildings; On average, government inspectors visit each company 2.4 times per month.

Borrowing and finance: 29% of the respondents have received a loan; 22% of these loans were under 5,000€ and 53% were between 5,000€ and 50,000€, 53% of the loans were for less than 12 months; 66% of the respondents invest profits in expansion of their company and 13% invest in new technology.

Consultant-identified general business opportunities:

Use of profits: Only 2% of respondents invest in training and education for employees. Upgrading management skills and employee technical competencies

2. Entrepreneur-identified factor conditions.

Raw agricultural materials: 38% of respondents source raw materials from small and large farms, and farm association/cooperatives; 46% source from traders; and 9% import directly. 47% of the respondents source their raw materials within 25 kilometers and 20% between 25 and 50 kilometers; 10% source from the FYR.

Problems with raw materials: 49% identified uncompetitive and extremely variable prices as the major raw material problem; and 16% have problems with insufficient quantities and 13% with poor quality.

Inputs (chemicals, etc.): 59% source inputs from traders and 12% import directly themselves; and 24% source inputs from other farmers.

Assistance from suppliers: 53% do not receive any form of assistance from input suppliers; 22% receive technical advice; 13% receive flexible payment schedules; 8% accept payment in kind; and 4% receive forms of credit.

Source of information on technology: over 53% receive advice from other firms or by observing other firms; 15% receive advice from friends; and 21% receive advice from suppliers.

Source of primary job skills: over 78% receive training from either former job experience or on-the-job training; family members provide 11% of job training; and less than 10% received training from universities or public training institutes.

Land ownership: Nearly 51% of respondents do not have any land problems; 18% identified available capital to purchase land as a problem; when they do have problems, 16% view taxes as too high; and 38% say there are high registration fees and no means for dispute resolution.

Technology: 42% view availability of technology as being below average and 58% view availability of technology as average or above; 99% view the cost of technology as average or above; 29% of the existing equipment is less than two years old; and 79% of existing equipment is less than 10 years old.

Infrastructure: 54% of the respondents identify road conditions as below average; 91% view trains access and availability as a problem; 44% view availability of electricity as below average; 75% view the availability and reliability of communications as average and above average and 74% view the cost of telecommunications as above average.

Investments: 58% of the respondents have made investments in their company to take advantage of sales growth and 22% invest to raise efficiency with modern technology; 22% identify high interest rates as an obstacle to investment, 34% identified the lack of own finance or lack of access to finance as a major obstacle to investment.

Human resources: 51% of the respondents viewed the availability of unskilled labor as above average; 35% viewed the availability of skilled labor as above average; 80% viewed the quality of skilled and unskilled labor to be average.

✍✍*Natural resources:* 79% viewed the availability of water to be average or above average; 89% viewed the availability of fuel to be average or above average; 72% found land availability to be average or above average and 28% identified the availability of land as below average.

Summary of factor conditions. Agribusiness respondents have identified the following factor constraints: Variability and uncompetitive prices for raw agricultural materials; poor quality local raw materials; poor infrastructure (roads, rail, and electricity); limited owner finance possibilities; limited access to banking and high interest rates; high cost of modern technology; and limited sources of information.

Consultant-identified factor opportunities:

✍✍*Sourcing:* 68% of the respondents source raw materials from an area less than 50 kilometers from their operation. This could be due to cost factors or lack of awareness of sourcing opportunities beyond their own municipality. KBS agribusiness team can provide sourcing information and options for processors. Also, contracting arrangements between processors and raw materials producers will be developed to help processors control the price variability they currently experience.

✍✍*Collaboration:* Agribusiness entrepreneurs source raw agricultural materials (46%) from traders and (59%) of inputs from suppliers. Also, wholesalers play an important role in sales, 35% of indirect sales are through wholesale channels. This level of collaboration represents a strong foundation to build substantive collaborative efforts. For example, suppliers are already a major source of technical information and this service role could be enhance with assistance by KBS in the development translated fact sheets on technology use.

✍✍*Financial decision making:* There is currently very little evidence of financial decision making based on analysis by the agribusinesses. As KBS agribusiness clients are trained in cost accounting and basic financial management they will be able to utilize this information to make important sourcing, marketing, and processing decisions.

✍✍*KFS production support:* On-farm productivity, post harvest handling and storage are important areas for the KFS grants program to develop.

3. Entrepreneur-identified demand conditions.

✍✍*Marketing:* 38% identified lack of finance for marketing as a major obstacle to market development; 19% identified no information on domestic markets, and 12% identified the quality of products. Also, 52% view similar companies as their main competitors; and 26% of the respondents view importers as their main competitors. 37% of the respondents believe that their competitors have preferred access to markets and 17% believe they have preferred access to credit.

✍✍*Export constraints.* 70% of the respondents identified border difficulties as above average, with 73% above average difficulties at the Macedonia border and 73% identified above average difficulties at the Montenegro border.

✂✂*Primary customers:* 60% identified households; 20% retail stores; and 7% traders from the same municipality; 3% traders from outside municipality

✂✂*Market knowledge:* 43% do not know their indirect customers' selling price or only the price range; and only 25% always know their indirect customer's selling price.

✂✂*Products:* 76% view their products as above average quality; 56% view products as healthy; 21% believe their products are of superior quality.

✂✂*Market locations:* 86% of respondents market their products inside their own municipality; 45% outside municipality; and 21% market to wholesalers; the average distance to primary domestic market is 30 kilometers and 36 kilometers to secondary markets.

✂✂*Export markets:* Less than 4% of the agribusinesses surveyed export and those that do export are state owned enterprises, wood products, leather, and a few specialized products. Most exports are limited to regional countries.

✂✂*Customers:* 59% of respondents identified ordinary customers as their major customer; 15% identified rural villagers as their primary customer; 9% identified customers who are willing to pay for high quality; 27% say they provide individual customers service, 22% said their products are with ethical production methods; 13% provide fast delivery; 14% provide certified quality documents; and 10% sell at the lowest price.

Summary of demand conditions. The agribusiness respondents have identified the following demand constraints: A lack of finance and market information constrains marketing plans; Customs regulations and procedures constrain imports and exports into neighboring countries; Marketing services are largely limited to local municipalities; market segmentation is not practiced to any degree; knowledge of market conditions outside their local markets is quite limited.

4. Entrepreneur-identified supporting industries conditions.

✂✂*Transportation:* about 57% of the respondents view availability, reliability, and cost of transportation to be average.

✂✂*Financial institutions:* Respondents view the availability of banks (55%) below average and 30% average; 62% view the cost of banking services to be above average.

✂✂*Input suppliers:* Respondents view the availability (65%), reliability (65%), and cost (60%) of input suppliers as average.

✂✂*Academic institutions:* Respondents view the provision of information by universities (55%) as below average; and 64% view the quality/reliability of research information by universities to be below average.

✂✂*Clustering:* 88% of the respondents said they receive below average assistance from local governments; Only 17% of the respondents indicated that their collaboration with other firms is above average; and when those few who do collaborate, they identified joint purchasing (48%) average and above average and transportation (45%) average

and above average. Also, about 70% of the respondents collaborate below average on marketing, production, storage, and other areas.

Summary of supporting industry and collaboration conditions.

Agribusiness respondents identified the following constraints: The provision of information from academic institutions is very limited; Agribusinesses receive no assistance from local governments; collaboration with other firms is very limited; and financial institutions are not available and costly.

Consultant-identified opportunities for collaboration and cluster integration:

Cluster: Clustering, as an approach to agribusiness development, is consistent with the localized nature of current business operations. Facilitating further integration of companies within a geographic cluster by the KBS agribusiness team will enable existing collaborative efforts to expand while contributing to individual company development.

5. Entrepreneur-identified firm strategy conditions.

Firm strategy: 71% of the respondents view adaptability to market situation as average; 66% view the importance of culture/tradition as above average; and 36% view downsizing as a strategic option; 79% view the threat of substitute products in the market as below average and average; and 71% the threat of new entrants into the market as below average and average. 50% of the respondents identified increasing production volume as part of their business strategy, 23% desire to broaden their domestic market, and 11% identified increase production capacity.

Management strengths: 69% view their managerial capabilities as above average; the main internal strength of the company was identified as 55% products, 12% employee capability; and 11% teamwork. Only 1.8% identified corporate image, 5.4% business process; and 8% organization as a main internal advantage of the company.

Marketing and pricing: 40% of the respondents identified use of own marketing materials, 35% personal contacts with customers, and 19% advertise in media as the primary marketing tools used by the company. 83% of the respondents view their price compared to products sold in retail stores as average; 82% view their prices relative to the industry prices as average; 72% view their prices relative to same type of small-scale firm as average; and 80% believe their prices next year will be average.

Direct and indirect distribution channels: Regarding direct distribution, 65% of the respondents distribute themselves, 10% sell in shops owned/rented in the municipality, 9% sell from their business site, and 5% sell from their homes. Regarding their indirect distribution channels, 35% of the respondents sell products to wholesalers; 22% distribute through local traders; and 21% sell to retail shops outside of the municipality. Only 5% of the respondents sell to restaurants.

Market assistance: 50% identified information on Kosovo markets and 13% regulatory information on foreign markets as types of market assistance received. On average,

only 5% of the respondents receive assistance or advice on market opportunities such as trade fairs, products/services, packaging, quality assurance, and advertising/promotion.

✎✎*Business deficiencies:* Respondents identified as the most important business deficiencies as 25% pricing products, 16% marketing/promotion, and 11% purchasing inputs. On average, only 5% of respondents identified production planning, operations, quality control, industrial standards, or accounting/finance as a deficiency.

✎✎*Competitive advantage:* The perception of competitive advantage of the company was identified as 25% as low cost, 25% product differentiation, and 50% viewed both low cost and product differentiation as their competitive advantage.

✎✎*Business opportunities:* 63% of the respondents identified understanding of the customer as their main business opportunity; 17% identified innovation within the company; and 11% identified cooperation with other companies.

✎✎*Competition:* 90% of the respondents view competition by similar firms to be average and above average; 70% view competitors costs as average; 62% view competitors quality as average and 30% view competitors quality as below average; 71% view competitors prices to be average; and 58% view competitors access to customers as average; 75% view the possibility of foreign firms capturing market share as average and above average. 68% of the respondents view the market power of buyers as average, and 63% view the market power of suppliers as average.

✎✎*Investment plans:* 63% of the respondents identified minor upgrade of equipment as the most important investment made in the last two years; whereas 19% viewed major equipment upgrades and 9% introduction of new products/services as their most important investment. Only 1% of the respondents made a major packaging upgrade.

✎✎*Company performance this year:* Business performance this year was identified as 40% always profitable, 24% all fixed cost were covered by sales, 12% returns were satisfactory, and 11% of respondents view the number of customers as satisfactory.

6. Entrepreneur-identified government related conditions.

✎✎*Government assistance:* 88% of the respondents identified no assistance from the government; 7% identified information on the local economy was provided.

✎✎*Main policy issues:* 26% of the respondents identified regulations for starting a business as the main policy issue; 19% identified export/import regulations; and 11% identified quality of roads and infrastructure. The main regulatory issues identified by respondents were 18% tax laws. 15% tax administration, 14% laws about loan collateral, and 13% import/export tariffs/taxes.

✎✎*Desired areas of assistance:* 43% desire the local government to provide adequate infrastructure; 35% identified safety/security for businesses; and 11% desire support for business investment initiatives. 40% would like the provincial government to promote private sector development and 37% desire policy programs that help with investment stability.

✍✍*Government departments:* 75% of the respondents identified taxation, assessment department they had direct contact the most often.

✍✍*Satisfaction with government:* 46% of the respondents identified somewhat dissatisfied and very dissatisfied with the government. 50% say they are somewhat satisfied.

Consultant-identified government related opportunities:

✍✍*Working group policy reform memoranda:* An important activity of the working group will be the development of policy memoranda based on analysis conducted by working group members (with support of KBS volunteers) on priority issues identified by the sub-sector. KBS will assist the working group in data collection and provide guidance on memoranda drafting procedures.

7. Entrepreneur-identified chance related conditions.

✍✍*Risks today:* 69% of the respondents identified economic stability as the most important risk; 11% identified price stability, and 10% identified political stability. Only 7% view crime as a risk to their business.

✍✍*Economic stability:* 65% of the respondents view inflation as below average, 61% view the risk of a currency devaluation as below average, 75% view the risk of greater imports as average and above average.

✍✍*Business risks:* 87% of the respondents view the risk of political instability as average and below average; 92% view the risk of AIDS as below average.

8. Consultant-identified constraints on agribusiness development.

The agribusiness consultants have identified ten major constraint areas on agribusiness development in Kosovo. They are: 1. Privatization; 2. Financial and Cost Accounting; 3. Quality Control; 4. Process Improvement (productivity); 5. Marketing; 6. Information Flow; 7. Collaboration; 8. Sourcing; 9. Financing; and 10. Trade and Investment. Under each of these ten areas constraints are identified and KBS actions to help mediate these constraints.

Privatization

Agri-business constraints:

✍✍*Limited investments.* Three major food processors are “leasing” space in SOE’s and must limit investment because they do not know what will happen to facilities when they are privatized

✍✍*A number of feed grain millers* are “leasing” space in SOE’s and have very limited storage capacity and currently are unwilling to invest capital improvements.

✍✍*Uncertainty (risk).* Several poultry producers are renting buildings from SOEs on a one year leasing arrangement. Such uncertainty limits decision making, forward planning, and investment decisions.

KBS actions :

- ✍✍ Advise USAID privatization project and other governmental bodies on the benefits of privatization on the agri-processing sub sector
- ✍✍ Assist agri-processors in the identification of capital improvements that can be economically accomplished under current ownership structure
- ✍✍ Assist agri-processors in the identification of alternatives to SOE buildings and equipment

Financial and Cost Accounting

a) Agri-business constraints:

- ✍✍ Processors, feed millers and input suppliers do not know precise production costs
- ✍✍ Inefficient operations management
- ✍✍ No breakdown of labor or variable costs for various operations of business
- ✍✍ Break-even points for running multi-production lines are unknown
- ✍✍ Improper product mixes for gross profit maximization
- ✍✍ Production line management is not planned in order to minimize cost and maximize output
- ✍✍ Improper resource allocation for net profit maximization
- ✍✍ No planning for future investment in capital improvements
- ✍✍ No financial projections determining future profitability
- ✍✍ No accounts receivables collection policy resulting in outstanding bad debt
- ✍✍ No joint investment plans for future expansion

b) KBS actions :

- ✍✍ KBS accounting department will implement accounting programs and teach cost accounting principles so that the agri-businesses can make proper operations management decisions based on correct financial and cost accounting data and principles
- ✍✍ KBS will assist in implementation of an accounts receivable collection program including advanced collection methods, timely payment discounts, collection agencies and write off of debt where appropriate
- ✍✍ KBS will help client prepare financial statement categorizing business expenses as fixed and variable costs in order to encourage maximum capacity utilization
- ✍✍ KBS will help processor develop cash flow projections on new investments in processing lines and input supplies

Quality Control

Agri-business constraints :

- ✍✍ Level of quality is not determined by the firm to provide the consumer with the best value for their money
- ✍✍ Quality level of products is not up to the market place standards causing product to be uncompetitive
- ✍✍ No quality control measures in place to insure that the consumer is provided with a consistently good quality product
- ✍✍ Quality control problems with agricultural input from the farmer

KBS actions :

- ✍✍ KBS relationship managers will help identify proper quality levels for market place and implement quality control measures

- ✍✍KBS agricultural unit will help identify correct quality test equipment and get volunteers to implement quality testing to ensure consistent quality product
- ✍✍KBS will analysis the import competition based on the quality of their product, packaging and advertising
- ✍✍KBS will conduct generic market research that can be used by processors to make appropriate marketing decisions
- ✍✍KBS will help client implement “BRANDING” program in order to obtain premium price for properly branded products
- ✍✍KFS and KBS will work with farmers and processors to implement quality control programs

Process Improvement (productivity)

Agri-business constraints :

- ✍✍Improper equipment is being used for processing food products causing bottlenecks in production line
- ✍✍Incorrect supplies are being provided to the farmer for yield maximization
- ✍✍Feed supplement ingredients are missing to produce the highest quality feed at the lowest price (no amino acids in feed grain blend)
- ✍✍No inventory control systems
- ✍✍Insufficient inputs of raw materials during part of the year causing loss of market share

KBS actions :

- ✍✍KBS will teach processors simple ABC method of inventory control
- ✍✍KFS will work with producers to increase production of specific products that are needed by the processor
- ✍✍KBS will help rational production lines for the processor and identify equipment needs

Marketing

Agri-business constraints :

- ✍✍Lack of marketing strategy for increased sales and utilization of production capacity
- ✍✍Product Improvement
- ✍✍Product Development
- ✍✍Distribution
- ✍✍No new sales and distribution channels (e.g. direct sales, sales through distributors, joint sales force, etc.)
- ✍✍No regular sales force meetings
- ✍✍No training of sales force in salesmanship
- ✍✍No mechanizes for feed back from sales force to determine consumer wants and concerns

KBS actions :

- ✍✍KBS will provide analysis of marketing and sales strategy and offer individualize training in proper marketing and sales techniques
- ✍✍KBS will provide volunteers to assist in commodity specific marketing and sales analysis
- ✍✍KBS will encourage and support processors participation in the Kosovo Export Association for export sales development

- ✍✍KBS will encourage the processors and input suppliers participation in B2B meetings
- ✍✍KBS will teach processor in-store promotion techniques to immediately increase sales
- ✍✍KBS will help identify new buyers of products through their contact list

Collaboration

Agribusiness constraints:

- ✍✍Producers, processors and input suppliers do not have a regular exchange of ideas and information concerning the agribusiness sector

KBS actions :

- ✍✍KBS will maintain working groups within the Farmer Associations to insure that timely exchange of information and ideas occurs concerning the agribusiness sector
- ✍✍KBS will develop with the workgroups a needs assessment on the types of research and marketing that is needed within the sector
- ✍✍KBS will educate the sub-sectors on collaborative marketing and research activities funded by the industry such as “check off” programs
- ✍✍KBS will bring in volunteers that will work with the Associations implementing research and marketing activities

Sourcing

Agribusiness constraints:

- ✍✍Agribusiness have a very limited knowledge of where to obtain basic equipment and supplies for operation of facilities
- ✍✍Processors have a difficult time locating spare parts for their processing machinery
- ✍✍Input suppliers have only one or two regular supply company and do not know where to obtain alternative products
- ✍✍International suppliers do not know Kosovo market and do not attempt to do new business here

KBS actions :

- ✍✍KBS will develop a domestic and international supplier data base for use by the agribusinesses for obtaining equipment and supplies
- ✍✍KBS will bring in volunteers on food processing equipment to assist processors with new equipment purchases and identifying sources of spare parts for equipment
- ✍✍KBS will educate international agricultural input suppliers on the ease of doing business in Kosovo

Financing

Agribusiness constraints:

- ✍✍Agribusinesses have insufficient or no financial statements for obtaining bank credit
- ✍✍Agribusinesses have a limited knowledge of different opportunities for financing
- ✍✍New agribusiness have no business history upon which to base credit

KBS actions :

- ✍✍KBS will develop accounting systems for the agribusinesses that meet the lending requirements of the commercial banks

- ✍✍KBS will develop a data base of credit opportunities for agribusiness
- ✍✍KBS will hold regular seminars on credit opportunities
- ✍✍KBS will assist agribusiness in reaching the appropriate organizations for credit
- ✍✍KBS will assist new businesses in looking for alternative credit sources

Trade and Investment

Agribusiness constraints:

- ✍✍Agribusiness lack knowledge of potential trade and investment opportunities with foreign firms
- ✍✍Most business do not have any knowledge of the procedures that they must go through to develop a working relationship with a foreign firm
- ✍✍Foreign businesses believe that Kosovo is not an attractive place to invest because of the past civil conflict

KBS actions :

- ✍✍KBS will offer trade and investment services to local and foreign clients on investing in Kosovo agribusiness
- ✍✍KBS will plan and organize business-to-business meetings in Kosovo to facilitate trade linkages with the agribusiness sector
- ✍✍KBS will establish contacts for local agribusiness with potential customers or partners, and facilitate negotiations
- ✍✍KBS will seek potential new buyers, marketing agents, and suppliers for agribusiness
- ✍✍KBS will provide up-to-date market information and planning assistance for new export opportunities
- ✍✍KBS will identify potential foreign investment partners, review investment proposals, and conduct initial due diligence on a potential foreign partner
- ✍✍KBS will develop a Trade & Investment web site database helping foreign businesses locate companies in Kosovo as potential partners
- ✍✍KBS will provide current information on economic, fiscal, and legal issues that affect agribusiness operations and investing in Kosovo
- ✍✍KBS will provide foreign investors a 'one stop shop' where they can save valuable time and energy. KBS's relationships with a large number of public and private sector entities will facilitate the investment process
- ✍✍KBS will contact US Department of Commerce to gather information on prospective investors in processor.

SECTION V. AGRIBUSINESS COMPONENT IMPLEMENTATION

1. Approach to coordinating technical assistance services

This section describes how the agribusiness component of KBS will coordinate implementation with the Kosovo Farmer Support (KFS) activity. The KBS Agribusiness Team will be providing standard KBS services to their agro-business clients. The Team will also coordinate efforts implemented by the KFS activity that pertain to the internal business functioning of the agro-processor.

a. KBS Services include:

- i) Firm level action plans and operational review meetings
- ii) Managerial and financial reporting
- iii) Marketing plans and strategic business plans
- iv) Trade and investment activities
- v) Quality and branding programs

b. KFS Services should include:

- i) Farm management and bookkeeping
- ii) Animal husbandry
- iii) Crop production methods
- iv) Contracting
- v) Post harvest handling and storage
- vi) Product quality and grading

The KBS agribusiness team will complement, when necessary, KFS technical services with technical volunteers supplied by KBS. Volunteers with both processing and production knowledge will be recruited to ensure effective linkages between production and processing.

c. KFS grants program criteria:

- i) All sub-sector participants are eligible for grants program
- ii) Grantees are willing to conform to a cluster development strategy

2. Performance Monitoring and Reporting System

- a. Base line established from sub-sector strategies
- b. All KBS agribusiness clients
- c. Monitoring will be implemented by the RM assigned to the agribusiness client
- d. Coefficients to be monitored include:
 - i) Revenues
 - ii) Operational profit
 - iii) Employment
 - iv) Total investment
 - v) Value of exports

e. Reporting

The agribusiness team will incorporate sub-sector reports into the periodic KBS monthly and quarterly reporting system. As with the normal KBS monitoring of targets, the agribusiness team will provide all necessary information on agribusiness targets.

3. Sustainability

a. Collaboration with the Agriculture Faculty:

Scopes of work developed for consultants and volunteers will include the requirement of making formal presentations on technical work at the Agricultural Faculty. For example, if a poultry volunteer completes a poultry operational management task and develops a tool for monitoring layer performance, this tool will be translated and then made available to as many poultry clients in Kosovo as the existing budget resources allow for. This information diffusion activity will be organized through a seminar series sponsored by KBS and the corresponding working group (i.e., poultry working group) and hosted by the Agricultural Faculty. The seminar series responds to the information constraints identified in the agribusiness assessment.

b. Synergies amongst industries:

The approach to integrated cluster development proposed in this work plan will not only strive to facilitate business linkages amongst cluster participants, it will also encourage, through joint activities, the promotion of synergies amongst the targeted sub-sectors. For example, there are clear business linkages between dairy production and meat processing, between feed milling and poultry, dairy, and other livestock enterprises. Furthermore, the inclusion of veterinarians who service poultry, dairy, other livestock enterprises; as well as input suppliers who service the milk and meat processors; will create real opportunities for increased synergies amongst the various project participants. The fostering of these synergistic linkages will be made explicit in strategic planning sessions with the partner associations/working groups.

SECTION VI. SUB-SECTOR STRATEGIES

1. Integrated Approach to Sub-sector Development

The sub-sector development approach begins with an understanding of the current market situation for the primary products produced by the sub-sector. Understanding market dynamics allows for identification of opportunities for sub-sector participants to develop their markets. The agribusiness assessment (broad based and sub-sector specific) have provided insights on the major constraints to agribusiness development. Then, with market knowledge and an understanding of major constraints in hand, project implementers will work with selected sub-sector clusters on the development of a strategy that defines goals and objectives for the cluster. The primary goal of all sub-sector strategies will be market development. However, market development activities will proceed in parallel with technical assistance to cluster participants in management strengthening, operational efficiency, marketing, quality and branding, and trade and investment.

a. Sub-sector clusters

A sub-sector cluster is defined here as a geographic cluster of firms oriented around a central processing facility. For example, in a given municipality the dairy cluster would be comprised of a dairy processor, veterinarians, input suppliers, milk assembly firms, and milk collection centers. There will be multiple dairy clusters located throughout Kosovo, each formed around a primary milk processor.

b. Working groups and Associations

There are USAID/Kosovo supported associations that can become the focal point for implantation activities. They are the emerging Dairy Association, the established Poultry and Feed Association, and Input Suppliers Association. The agribusiness team will form within the respective association and with the participation of the associations, a working group as a point of contact for the association. Membership in all working groups will be multidisciplinary which is consistent with the integrated approach to cluster development. For example, the membership of the working group of the Dairy Association will include milk processors, veterinarians, input suppliers, and milk collection firms.

The KBS agribusiness team is also recommending that the fruit and vegetable, and specialty products sub-sectors be considered for technical assistance. The Drini Valley Vegetable Producers Association (Anadrini) will be the focal point for the fruit and vegetable working group. The Kosovo Export Association may be the best vehicle for forming a working group for the specialty products cluster. This possibility will be investigated further. The working group for the Meat and Leather cluster will be organized by entrepreneurs interested in collaborating with the KBS agribusiness team on implementation activities. It is understood that there is an emerging meat producers and processors association. The situation on the evolution of this association will be monitored closely and an assessment of their viability determined.

i) Sub-sector working groups .

1. Dairy cluster working group – Kosovo Dairy Association
2. Poultry, Feed and Oil seed cluster working group – Poultry and Feed Association

3. Meat and leather cluster working group
4. Fruit and vegetable cluster working group – Vegetable Producers Association
5. Specialty products working group – Kosovo Export Association

ii) Sub-sector working group activities.

The KBS agribusiness team will assist the working groups with the following activities:

1. Sub-sector (cluster) development strategies: Identifying constraints and action plans
2. Market development strategies: Increasing demand
3. Trade activities: Jointly sponsored business-to-business
4. Quality certification activities
5. Dissemination of information products and technical tools

c. Roles and responsibilities

The agribusiness competitiveness advisor, Peter Dickrell, will be responsible for organizing the working groups in a strategic planning workshop. He will be assisted by the Senior Relationship Manager (SRM), Naim Avdiu, and the designated cluster relationship managers. They will work with members of the Working Group on sub-sector strategies and with individual (geographic) clusters on cluster strategies.

Dennis Zeedyk, is the designated Business Development Specialist, responsible for managing the agribusiness team Relationship Managers on the delivery of KBS services to selected clients. He will be assisted by Senior Relationship Manager, Naim Avdiu, in the scheduling of consulting services, as well as the training in managerial and financial reporting systems, marketing, strategic action plans, and conducting operational review meetings (ORM). Naim will report to Dennis and they will ensure that all RMs are meeting their established targets.

Agribusiness development specialist, Dennis Zeedyk, will also coordinate with each grantee on implementation issues related to production. Dennis will ensure that grantees are in compliance with the cluster development strategies. He will also assist Peter Dickrell on Working Group management issues and proposed public awareness campaigns.

2. DAIRY CLUSTER

a. Market Situation

In 1999, Kosovo suffered the devastating affects of civil war. Damage to livestock and dairy producers was extensive. USAID/Kosovo has embarked on a series of programs in an effort to put Kosovo back on track after the civil war. One of the sectors selected for attention is the dairy industry. Milk production is fairly wide-spread throughout Kosovo and improvements in the production, collection, distribution, and processing of milk will lead to added income throughout the rural sector.

The Kosovo dairy sector is poised to take a giant step forward in the increased production of high quality milk. This production must be accompanied by the manufacturing and marketing of high quality dairy products. The dairy sector is a prime example of how an industry must progress in terms of technology and systems or be left behind in the world market. To launch the dairy industry in Kosovo to the next level of competitiveness, a focused approach that introduces technology to the dairy farmer to maximize cost-efficiency in the production of milk is essential. Furthermore, the processing and distribution of high quality dairy products combined with aggressive marketing and promotion of their nutritional benefits is needed to stimulate demand for dairy products made from locally produced milk. The ability for the sector to grow and prosper must be based on improvements in cost efficiency and quality control at each level of the dairy sector from the farm through the processor to the consumer. It is only through the introduction of technologies at each of these levels that the Kosovo dairy industry will increase the internal demand for dairy products.

The total dairy cow population in Kosovo is about 155,000 head. The average “dairy” farm is about 4 to 5 cows being milked once a day with average yield per cow of less than 2.7 liters. This dismal yield per cow is in contrast to a number of private commercial dairy farms in Kosovo milking 30 to 40 head of full bred Semimetal cows twice a day getting an average of 25 liters a day per animal. Milk production per cow at the small farms is extremely low because of poor genetics, little or no veterinary care and the lack of feeding of the animals high protein feed grains. Also, management productivity parameters (days open, duration of lactation, age at first calving, etc.) are very low.

An additional constraint is that Kosovo milk production is based on pasture grazing, therefore, it is very seasonal. During the summer season, production rises as much as sixty percent over production during the winter season. Prices paid for milk reflect the seasonal pattern. During the winter and spring the price paid for milk by the processor is .30 €a liter which is substantially above the world market price of .24 €per liter. During the summer and fall when the cows are in full production the processors are paying .22 €to .26 €per liter. Further, the processors have trouble using all the milk in the summer therefore they are not as vigilant in picking up all the milk offered by the farmers. The milk that can not be sold to the processor by the farmer is sold in the local market for substantially less than .22 €per liter or is used at home to be made into cheese and yogurt which is consumed by the family.

In general, during most parts of the year the price the Kosovo farmer receives for milk is above the world market price. The average world market price for milk is about .24 €per liter with New Zealand farmers receiving as little as .16 per liter and Israeli farmers receiving .34 €per liter. U.S. and European farmers receive about the average world market price. The Kosovo farmer during the flush season receives from the commercial processor about .24 €per liter.

This is at the time of year when the milk producer has the most milk. Therefore, the average price throughout the entire year is far below the .30 €price.

The commercial farmers that were interviewed indicated that the .24 €price was “more than sufficient” for them to make a profit on their farming operation. In fact, all of the commercial farming operations interviewed were in the process of expansion of their herd size based on the fact that .24 €might be the price that they receive through out the entire year. However, for most of the small farmers this price is insufficient to sustain or improve their farming operation because of the small amount of milk they are producing. In order to benefit the small farmer both an increase in production efficiency and an increase in the price for their milk during the flush part of the year must be gained. Even small increases in the volume of milk produced per day with an increase in the value per liter for their milk will have a dramatic effect on the daily income of the average farm family.

It is estimated that total demand for dairy products is about 227,000 metric ton (mt) annually assuming an annual consumption rate of 126 liters per person. This consumption rate has not been verified; however, it is substantially below the dairy consumption rate of Europe or the United States which is approximately 180 liters annually. Importation of milk into Kosovo is about 74,000 to 100,000 MT per year. Importers surveyed estimated that 120,000 liters (43,800 MT/year) of imported UHT milk is consumed daily in Kosovo. Importers are paying .50 €a liter for the UHT milk in Hungary and Serbia, transporting it to Kosovo and selling it to the grocery stores for .65 €a liter. The Grocery stores are then selling the UHT milk for .75 € to .80 €a liter. Every store surveyed carried fete cheese from Hungary ranging in price from 2.50 €to 3.00 €. The locally produced fete cheese was sold in all of the green markets but was carried in less than 10% of the stores surveyed and sold at an average price of 2.50 €. The packaging of the local produced fete cheese was inferior to that of the imported cheese. In the opinion of the author of this paper, a Wisconsin certified cheese grader, the local cheese displayed inferior taste qualities having off-flavors caused by impurities in the raw milk used to produce the cheese.

The total local production of milk is unknown because so much of the milk is sold in the informal market, however, CARE estimates that 25,500 MT is produced a year out of which 14,600 MT is made into cheese and 10,900 MT is sold as fluid milk and yogurt. Currently, local production of milk and imports of dairy products does not come close to meeting Kosovo’s total demand for dairy products.

There are only four commercial dairy processing firms currently in operation in the Albanian section of Kosovo and one in the Serb area¹. These firms are located in Gjakova, Pristina, Gjilane, Prizren and Zvecan with a total production capacity in excess of 40,000 liters of milk a day with existing equipment and up to 60,000 liters a day with minor repairs to existing equipment. The factories are currently processing an average of 1,200, 2,500, 1,500, 2,000 and 1,000 liters of milk a day. These companies supply a limited range of dairy products to the domestic market. Since the market is substantially served by imports, their immediate goal is to compete effectively with the imported products. The quality of their products range from poor to excellent. All the processors demonstrated the ability to produce high quality milk products, however, quality control is a problem.

These firms produce a mix of packaged fluid milk, soft and firm yogurts, cheese and cream. All the processors indicated that the greatest profit margin was on the fluid milk. The

¹ Abi, Bylmeti, Go Iaj, Kabi and Zvecan

processors are buying the milk at between .22 and .30 per liter, selling it delivered to the retail stores in Pristina for .45 per liter and the store is selling it for .50 to .60 per liter. The factory takes back all returns of milk that goes bad before it is sold. In the winter time this is less than 1% of sales, however, in the summer with the onset of hot weather this can run up to 25% and sometimes more when the electricity is off for more than 24 hours. Their biggest competition is imported UHT milk from Hungary which is selling for between .60 and .80 a liter.

The processors indicated that yogurt was also a profitable item. The factories usually produce twice as much yogurt as all other products combined. The biggest cost of production for the yogurt besides the milk is the cost of the packaging. They claim that they are paying an import tax on some of the packaging material which is causing them to be uncompetitive with imports. The biggest problem the factories are now having is with the lack of electricity. The cost of running the refrigeration units with a power generator is very costly for the factories. A couple of the factories were attempting to get the yogurt to the market on the day it is made which is causing an additional expense.

Cheese is basically a loss leader item. All the factories claimed to be “losing” money on the manufacturing of cheese. On “White” cheese they nearly broke even because they had about 8 liters to 1 kilo conversion rate from milk into cheese. With the “Yellow” cheese they all said they lost money because they had about an 11 liters to 1 kilo gram of cheese conversion rate. Currently, they do not receive any price differential between the two cheeses. They made the yellow cheese on a per order basis only in order to keep their other products in the distribution channel. One factory was making a fresh “mozzarella” once a week and had an excellent market for the product even though the cost of production was higher than any of their other products. They are receiving a premium price for the product because the consumer knows it is fresher than the imports and is willing to pay extra for the freshness.

All the factories had production capacity far in excess of their current production. The reasons given by the processors for the under utilization of their production capacity was:

- ❌❌Lack of market because of competition from imports;
- ❌❌Lack of electricity at the retail level causing the milk to go bad;
- ❌❌Lack of electricity at the processing plant level making refrigeration of fresh milk very costly;
- ❌❌Lack of supply of milk during the winter hindering market development;
- ❌❌Quality control problems with the milk coming in from the farms;
- ❌❌Quality control problems at the production level;
- ❌❌Quality control problems at the retail level.

All of the processors indicated currently they had an excess supply of milk given the market conditions, however, they have problems getting enough milk during the winter season which they thought adversely affected their total market development efforts through out the entire year.

b. Constraint Analysis

The ability of both the producer and processing sectors to grow and prosper is not assured absent broad-based improvements in operational practices and technology transfer. The Kosovo dairy sector can be made more competitive with a reasonable amount of development and investment. This aid must be structured to encourage the development of specific aspects of the production, processing and marketing working together in order for the entire industry to grow. The “recommendations” for the modernization of the Kosovo Dairy Sector are

numerous; however, all can be implemented with a coordinated effort by all parties. The challenges facing the dairy industry in Kosovo revolve around three central issues: productivity, quality and market development. The three major constraints in the Kosovo dairy industry are:

Kosovo and Hungary are both milk producing countries, however, Hungary produces much more milk per farmer and exports their high quality dairy products through out the region. The difference between the two national dairy industries is a question of operational scale and level of technology. As much as 90 percent of Hungary's raw milk production flows through industrial dairy processors. In Kosovo, the proportion of raw milk flowing through industrial processors is less than 10 percent. Normally, in Kosovo the locally produced milk is sold at ambient temperatures in the local market. Much of this production is consumed at home as fresh milk or made into yogurt and cheese. In every urban and rural area, UHT milk and imported cheese can be found in the markets and retail grocery shelves. The locally produced dairy products have difficulty competing with the imports because of quality and packaging. This situation is not unlike Hungary 20 years ago. However, Hungary through financially strong and commercially viable farming units and strong dairy processors developed a healthy dairy sector and is now a net exporter of dairy products.

Productivity levels at the farm level are extremely poor even by standards within developing economies. This is caused by how extremely small the farm sizes are and the failure to use modern milk production techniques. The small and medium sized dairy farmer's net income based on their size and resources is smaller than could be achieved by a "commercial" farming enterprise with modern milk production methods. At the producer level a small increase in productivity can substantially increase their general income thus allowing them to make improvements in their production facilities resulting in a growing and healthy dairy industry.

Poor dairy product quality caused by poor handling practices at both the farm and processor levels and inadequate transportation, storage and handling practices between the farmer and the processors. Poor milk quality causes hazards to the consumer's health, restrictions on the type of dairy product that can be produced and decreases the quality of the products that are produced thus making them unacceptable to the consumer. Further, poor handling practices at the retail level results in the consumer receiving a sub-standard product therefore reducing future sales.

There is an insufficient supply of high quality milk throughout the year and insufficient demand for high quality locally produced dairy products during the flush season. This causes the processor to buy the extra milk at very low prices during the summer, therefore, producing more cheese and yogurt than the market can handle. This benefits the consumer with low priced cheeses, however, ultimately reduces farm income. It is the classic example of price inelasticity of demand vs. oversupply of production.

Quality is one of the most critical elements in developing a strong dairy industry. Poor sanitation and milk handling practices are pervasive at the farm level. Collection systems suffer from poor handling practices and lack of refrigeration. A high stable price can not be paid by the processors for poor quality milk. The competitiveness of Kosovo dairy products in both domestic and international markets is seriously compromised by the generally low level of milk quality. Production of raw milk at reasonable high levels of quality is the most fundamental step needed to improve the Kosovo dairy industry, but without corresponding improvements in the way dairy companies process the milk, the economic benefits of farm level improvement will be impaired. Stronger demand created by improved quality will be the

foundation for the industry's sustainability and future growth. This quality demand driven approach is distinct from previous development approaches that have often focused on increasing production efficiency and supply. A total supply and demand approach must be implemented to ensure a strong market for high quality locally produced dairy products.

The oversupply of milk during the summer season which cannot be processed into high quality dairy products causes price variations that deter farmers from investing in their farming enterprise. Currently, current milk supplies exceed the market demand during the flush season causing a low price. The low price of milk during the flush season is a disincentive to investment by dairymen into quality and productivity enhancement. USAID can break this cycle by assisting the processors to invest in high quality dairy products production while at the same time increasing market demand in the fluid milk market. This is going to take investments of time, resources and money by both the production and processing sectors.

Dairy development assistance for Kosovo must provide technology and services through three main activities:

Consumer Marketing and Promotion. Increased demand for dairy products through educating and encouraging milk and dairy product consumption at the consumer level.

Quality Value -added Processing. Increased profitability for processors in the form of improved quality products commanding higher market values in the domestic market and effective "BRANDING" campaigns to promote the consumption of milk;

Increased Production of High Quality milk. Increase the production of high quality milk through training in proper milking and milk handling practices, storage and transportation of milk. This will be done with small farmers through the farmer owned milk collection centers. Increase the production of high quality milk through the appropriate use of artificial insemination, high protein feed concentrates, proper veterinary medications and farm financial management;

c. Cluster Development Approach

The approach to dairy cluster development in Kosovo is characterized as integrated throughout the value chain (including allied industries) and places initial emphasis on creating demand for quality dairy products. Market development in parallel with quality improvements in milk production and processing are essential to the approach.

d. KBS Participants include :

- i)** Milk processors
- ii)** Milk collection & cooling services
- iii)** Veterinary services (Artificial Insemination (AI), medications, health)
- iv)** Milk transportation services
- v)** Input suppliers for milk production. (Milking equipment, farm machinery, cleaning supplies, diesel fuel, farm management services, computer technical services, waste management systems, water and irrigation services, custom field preparation services, seed suppliers)
- vi)** Input suppliers for Dairy Processing. (Milk production equipment, dairy processing equipment, milk filling machines, packaging, appropriate technology for milk processing, pasteurization equipment, custom stainless steel equipment)

manufactures, plastics molding manufactures, technical services for equipment repair, distributors of dairy products to retail and restaurant trade, chemical supply companies, milk testing equipment companies, delivery truck sales and services companies, advertising and promotion agencies, package design companies, export certification companies, freight forwarders, export consolidation companies)

e. KFS Production support activities (coordinated with KBS)

- i) Dairy farmers
- ii) Feed grain production
- iii) Silage production
- iv) Forage production
- v) Services

f. Dairy cluster working group (Dairy Association)

- i) Sub-sector working group members include: Dairy processors, Veterinarians, Milk collection stations, and Inputs suppliers.

g. Development of a Dairy Industry Cluster Strategy

The agribusiness competitiveness advisor, Peter Dickrell, will be responsible for organizing the Dairy Working Group in a strategic planning workshop. He will be assisted by the Senior Relationship Manager (SRM), Naim Avdiu, and the designated dairy cluster RM, Zijadin Gojnovci. They will work with members of the Dairy Working Group on a sub-sector strategy and with individual (geographic) dairy clusters on dairy cluster strategies.

Agribusiness development specialist, Dennis Zeedyk, in addition to providing technical support to the RM's on the Agribusiness Team, will coordinate with grantees on production related issues and ensure that all dairy related grantee plans are practical, achievable, and consistent with the developed dairy strategies.

h. Mitigating Demand Constraints - Consumer marketing and promotion activities

i) Market development.

The milk processors in Kosovo must be assisted in developing markets for high quality dairy products using locally produced milk. It is only when the processor sees a benefit to filling these markets with locally produced dairy products will they have a need and desire to pay a premium price to the farmer for high quality locally produced milk. Therefore, the KBS agribusiness team will assist in the formation and functioning of a Dairy Working Group (DWG) within the Kosovo Dairy Association. This group will identify, establish and develop markets for high quality dairy products. These markets include but are not limited to fluid milk and flavored milk, Mozzarella cheese, ice cream (using locally produced dairy products and not palm oil and powder milk as is currently being used), butter, cheddar cheese for the fresh market and processed cheese markets, cheese foods and ingredient additives. Further, the DWG must assist the processor in producing dairy products that are currently being supplied to Kosovo from other countries that can be more profitably produced locally. The DWG will assist the dairy production facilities in fulfilling these markets by educating them as to the size and scope of the markets, market demand for quality product, packaging

and marketing requirements, and production requirements such as equipment, production techniques, quality control and packaging and storage needs.

A good example of an important component of the dairy market that has not been developed by the dairy processors is the “international community”. The KDA will support the local dairy sector in gaining access to the procurement processes of the International Organizations/NGOs (IO/NGO) and most importantly the military bases and installations. KDA will offer local dairies the opportunity to learn how to navigate IO/NGO procurement systems. This will include identifying major dairy products that IO/NGOs procure, standards that must be adhered to by the processors and the specific processes necessary to become a certified vendor selling to IO/NGO. This is a huge totally untapped market for locally produced dairy products.

There is little value in creating more high quality dairy products if there is not a corresponding expansion of the market for these products. There is a distinct need to dedicate resources to increasing consumption of Kosovo produced dairy products. The Kosovo Dairy Working Group can expand dairy product sales and consumption among the domestic population through promotional efforts, school nutrition education and retail market development. These marketing efforts can be done through a self funding type “check off” program run by the dairy industry such as those used in the United States and Europe. A powerful “check off” program for Kosovo would include the processors of local produced dairy products and importers of dairy products working together to develop a strong market for high quality dairy products. Revenues for operating the “check-off” program can be obtained from the local processor, also, more importantly from the importer of dairy products creating a self-sustaining promotional budget.

The dairy products market in Kosovo compared to milk markets in Western Europe and the United States is reversed. The percentage of consumption of fluid milk versus cheese and other hard products is inversely proportional. In countries like the US and Western Europe, 80 percent of milk is consumed in the form of milk, yogurt, ice cream and other soft products and 20 percent is in cheese. In Kosovo, the consumption is in the range of 20 percent fluid milk (mostly UHT) and soft products such as yogurt and 80 percent cheese. Clearly, the fluid/soft segment lead by the commercial segment of the market has a huge growth potential.

In all strong dairy sectors the packaged milk market is the most profitable and carries the industry forward. Cheese is normally an outlet for excess milk production. Of course, cheese is an important component of the dairy sector but without a viable and strong fluid milk market the dairy sector in general will be weak. This is evidenced by the US consistent promotion of the fluid milk market through the “Got Milk” type campaigns.

The Kosovo Dairy Working Group can help expand the market for dairy products through targeted market development activities. The Working Group should develop a powerful and aggressive marketing program in the schools and the retail market. The program should conduct market and consumer research, fund the design and development of media promotional campaigns, and provide training to key industry leaders. KBS through the KFS grants activity can assist the working group in development and implementation of these marketing programs by providing marketing research, promotional development and technical assistance. The market development program must target the youth market. Activities must be conducted to educate mothers on the health benefits of milk as a component of their family's diet. Other highly focused strategies include targeting schools and clinics providing prenatal and pediatric care.

ii) Processor strategy – product differentiation through quality value -added processing activities

The dairy processors will not be interested in working with the new dairy farmers and committing themselves to paying higher prices and purchasing all of their milk, particularly during the flush season, if they cannot, in turn, foresee economic benefits from receiving, using and paying for higher quality milk.

The development of the commercial dairy processing sector is critical to the future development of the Kosovo Dairy industry because they take the excessive milk production off the market during the flush season, add extra value to the milk and extend sales over the course of the year. The KBS agribusiness team in collaboration with the grants program must provide technical assistance to the commercial dairy sector in new product development, use of specialized equipment, line balancing, and processing changes to increase their profitability based upon their use of locally produced high quality Kosovo milk. Technical assistance and personnel training in quality control, new product development and related aspects need to be provided to the commercial sector to bring them the most advanced yet appropriate dairy processing in the world.

Training and Technical Assistance. Training and technical assistance to cheese plants will be provided to enhance the use of good quality milk in order to produce higher quality dairy products. Most importantly the cheese plants will be assisted in making the transition into becoming commercially viable cheese factories providing a consistently high quality product to the local and international market. The only way that a consistently high quality product can be produced is through the use of high quality milk. The development of high quality products combined with the use of higher quality milk is guaranteed to lead to increased sales and profitability. Technical training provided by U.S. volunteers on Good Manufacturing Practices (GMPs), Standard Operating Procedures (SOP's) and Hazard Analysis of Critical Control Points (HACCP) for all levels of personnel can be offered to dairy plants that are willing to invest in management improvements.

Processing Equipment/Capacity Improvement. The Dairy Development Program will provide assistance in proper equipment use and purchase. All of the current plants have points in the processing line where milk runs through plastic pipe as opposed to stainless steel or through other conduits (like pumps) that are not amenable to easy, thorough cleaning. Machines used to separate cream from milk are improperly set up leading to points of bacterial contamination. Similar observations were made about cheese vats, moulds, and presses. The KBS will assist the factories in locating and purchasing replacements for this equipment. Further, double walled, heated cheese vats will be introduced to the factories which will facilitate the pasteurization of the milk and the introduction of new cheese varieties to the market. Reasonable investments in these areas can have dramatic results on end product quality.

Packaging Development Strategies. Packaging of products is an area where improvements will have immediate impact on product cleanliness and consumer appeal. The KBS will assist the processors in appropriate packaging design, purchase of machinery and proper use of packaging equipment. The introduction of vacuum packaging equipment will be encouraged for appropriate processors. A relatively small investment of \$1,000 to \$4,000 on a vacuum packager can improve the retail shelf appeal of a product more than any other technique.

New Product Development. The most important assistance to the commercial dairy sector will be in the development of new uses of high quality milk during the flush season. KBS through

the Dairy Working Group will help identify and develop commercial uses of high quality milk. There are three very important commercial uses of milk that KBS and the Dairy Working Group should immediately assist the commercial sector in pursuing. The reason that these ventures are important to the development of the dairy sector is because each of these ventures must use a large amount of milk to cover their capital investment and have high profit margins that are attractive to the commercial sector. Most importantly each of the ventures transfers the milk from a product that must be processed and sold within a week or two into products that have a shelf life of up to six months thus extending their marketability from the flush season into the dry season. While most of these commercial uses can not be put into place immediately they must be looked at to develop long range strategic plan for the future of the dairy industry.

The most feasible commercially viable dairy processing ventures are:

New Fluid Milk Products. The largest growing sector of the dairy industry in the US, Europe and Latin America is the flavored yogurts and milk market. Flavored yogurt appeals most to individuals who want a healthy alternative to other sugared products. They are a cost competitive alternative to sodas and fruit drinks while providing a much better nutritional profile. Even in the most economically depressed conditions parents are willing to provide a healthy beverage to their children if given the opportunity. They are easy to produce and can be packaged using packaging equipment already in use at the dairy plants.

Grade A Mozzarella Plant. Consumption of mozzarella cheese in all transforming economies is the fastest growing dairy product because of the increase in the consumption of pizza. Currently, most of the product used in Kosovo comes from Hungary, New Zealand and the EU. Given the current milk production situation in Kosovo, it may be profitable to establish a small mozzarella operation destined to serve the domestic market and perhaps in the future the Balkans market. A mozzarella plant in order to be profitable must be provided absolutely constant Grade “A” quality milk from the farmer. The Dairy Work Group would undertake a marketing study to determine the feasibility of developing a mozzarella operation. A simple market analysis for mozzarella cheese shows that a large amount of high quality milk can be taken off the market. One of the commercial processors already produces a small amount of fresh mozzarella and with some small production changes they can produce a better quality mozzarella cheese for use on pizza by using partly skimmed milk. The cream that is taken off the milk in the process of making the cheese can be used for higher value products such as fresh cream and butter. Technical training through KBS can be provided to show the most cost effective way to produce high quality mozzarella using existing machinery at the plant. As mozzarella production increases, KBS can use a volunteer to help source the proper machinery for large scale production.

Natural Cheddar Cheese, Specialty Cheeses, Processed cheeses and cheese spread lines. Cheddar cheese, Specialty Cheeses and processed cheese products have historically been the way that developed dairy sectors have dealt with the excess milk production during the flush season. In fact a large amount of cheese in the US and EU is produced straight into “barrels” of cheddar cheese that are later “melted” into processed cheese when the need arises. The cost of the milk at the high season in Kosovo is currently too high to make this economical, however, the production of cheddar cheese should be considered in the future as milk production increases.

i. Mitigating Factor Constraints - Increased production of high quality milk

Milk Collection Centers (MCC)

The dairy sector must consider development issues within an integrated framework that will couple each problem with solutions that work with each other to accelerate the development of the dairy sub-sector. The KFS grants program can assist dairy producers within a dairy cluster to gain access to high priced, high quality milk markets through contractual selling relationships with the processors. The main thrust of the initiative is to secure a high priced and stable market for the milk production of some of the smallest and poorest farmers in Kosovo. The main focus should be to increase the quantity and improve the quality of milk that is being produced by the local small farmer so that they may receive a year round premium price for that milk.

Improving milk quality is relatively easy to do if the farmer receives a higher price for their grade “A” quality milk. This can only be done through implementing improved on farm sanitation practices and improved milk collection and cold storage capabilities. Strict milk testing procedures must also be instituted in order to ensure the buyer is receiving and paying a premium price for only the highest quality milk.

Milk processing plants that will produce high quality dairy products can not be constructed and operated before the source of the supply of high quality milk is assured. The Grants program will be instrumental in getting both high quality milk sourced while at the same time encouraging the production of high quality dairy products. This must be done in a step by step manner. A few milk collection centers are setup showing the farmers and the industry the possibilities of small farmers producing high quality milk. This will give the farmers the incentive to start producing more milk and the processors to buy more high quality milk from small farmers.

Currently, milk collection in Kosovo is largely done under crude and unhygienic conditions. The norm is the use of plastics jugs which are impossible to sanitize after use rather than aluminum cans which can be washed and sanitized using chlorine in a very simple and quick procedure. This milk is then transported at ambient temperatures to the milk processing plant. The KFS grants program should establish farmer owned and operated milk collection centers (MCC) that will substantially improve the quality of milk coming from the farm into the centers. The centers will then test, cool and handle the milk using Standard Operating Procedures (SOP's) that will guarantee Grade “A” quality milk. These centers will be established in conjunction with processors who are willing to pay a contractually guaranteed premium price on a yearly basis for milk reaching Grade “A” quality standards.

The proposed organizational scheme for the MCCs is to have no more than twenty five farmers associated in a formal business organization that can buy land, obtain financing, and enter into contracts. These business organizations with the assistance of the grants program will establish a business that transports, collects and stores milk. The centers will be capable of entering into contractual arrangements with buyers of high quality milk.

The functioning of the center is relatively simple but very precise. The centers are located so that each and every member of the center can get their milk to the MCC within 30 minutes after the milking of the last cow. The milk is then tested at the center according to precise SOP's and if the milk meets the pre-determined quality levels is commingled with the previously collected milk. The milk is then cooled to 40 degrees Fahrenheit stopping all

bacterial growth within less than 30 minutes. From the time the milk is at the farm to the time it is cooled it is less than an hour. In addition, samples are sent to the processing plant with each tank load that is shipped for more elaborate testing to assist the farmers to continue improving their quality levels. The milk in Kosovo under current milk collection schemes for the small and medium sized farmer does not normally reach 40 degrees for up to four or five hours after the last cow is milked. By this time the milk is off flavor and sour.

The following are the minimum requirements for the profitable functioning of a Milk Collection Center:

- ✂✂At least 500 liters of milk at the lowest time of the year is available from the farmers participating in the group;
- ✂✂Enough cooled milk must be available in a general region to make it feasible for a processor establish a cold milk route;
- ✂✂Access to a dependable electric supply;
- ✂✂Buildings with clean floors, walls, and screens to house the tanks;
- ✂✂Most centers will have a 1,200 liter tank that will cool milk in less than a half hour;
- ✂✂Basic lab equipment to test temperature, sediment, specific gravity (detect added water), acidity, and a few other basic tests.

The order of establishment of the Milk Collection Centers is as follows:

- ✂✂Identify groups of farmers that are in close proximity that produce roughly 500 liters of milk a day;
- ✂✂The groups are then taught about milk collection and milk quality control;
- ✂✂The groups that want to participate then form legal business organizations that can sign contracts and obtain financing;
- ✂✂A contract is then signed by the processor and the producer outlining the comment to pay a premium price if the group of farmers provide grade A quality milk;
- ✂✂Farmers arrange for the construction of buildings, power plant, water supply, etc.
- ✂✂The Dairy Development Program finances purchase of the lab equipment to be used by the recipient farmers association;
- ✂✂The Dairy Development Program provides training in business management and milk testing;
- ✂✂Milk is received by the farm groups and sold to the processor at the prearranged price;
- ✂✂Second phase of business development including further value added processes to the milk and services provided by the association to the individual farmers.

j. Mitigating constraints on cluster development (collaboration & information):

Full Service Input and Supply Centers

The Milk Collection Centers are a natural venue for dissemination to the farmers of important information and inputs such as technical assistance, veterinary services, artificial insemination, and feed, by input supply companies working with KBS. The establishment of the MCC's help improve the individual the farmers' production practices. With new income, there is an increase in the use of high protein feed and veterinary care which greatly improves the productivity of each animal. Further, almost overnight because of the availability of refrigerated cooling facilities producers will be able to milk twice per day resulting in a potential increase in milk production per animal of 40 percent.

The most powerful way to assist farmers to gain access to the markets for inputs of goods and services is to show them how to work together to purchase these goods. The grants program

will assist the farmers to obtain technical training they would not have received had they been marketing their milk as individual farmers. The farmer groups can implement artificial insemination and veterinary services using the milk collection centers as the catalyst through which to provide these services.

The Veterinary services working with KBS should also introduce improved genetics that will also improve productivity, especially if accompanied by the practice of milking twice daily. The KBS can assist in the procurement semen and artificial insemination equipment that will be disseminated by the Veterinary services to the farmers. Resulting genetic improvements, over the long-term, will permit the production of larger quantities of milk with fewer animals.

These services will assist the producers in achieving greater efficiency and market power. The objective will be to establish full service supply centers that will serve as a source of input supplies and information. The beneficial attributes that will result include increased on-farm income, improved production and processing efficiency, job creation in rural areas, as well as economic growth both upstream and downstream in the livestock sector. The full impact will be growth in the development of the Kosovo livestock products marketing chain and the employment and income generation that accompany that growth.

iii. Economic Impact

There is conservatively estimated about 74,000 mt of milk imported annually into Kosovo, the border value of milk is estimated to be €358/mt making the import substitution value €26.4 million. At the retail level, the value of currently imported milk is estimated to be €51.8 million annually. This equals €28.77 per person annually for imported milk.

There are five large dairy processors and about 50 small dairy processing firms located throughout the area. The approach in this sub sector should be to expand milk output in Kosovo to increase the amount of milk available to the domestic commercial dairy processing industry. By increasing raw milk supplies the domestic sector can create investment and employment opportunities, as well as benefit the general economy by providing up to 26.4 million in import substitution into the economy.

The development of the dairy producing sector should focus on farms that have five cows or more. A household that has less than five cows has a limited, regular surplus of milk to sell to the processors. Assuming a mean yield of 1,000 liters per year, a two-cow household would produce only 2,000 liters per year. With a rural household size of 6.9 persons, the average available milk per household member would be 0.79 liters per day. Because of the fluctuation of production, in the summer this is more than the daily requirements of the household, however, in the winter there is no surplus to sell to the processor. Development of the milk production sector must focus on the “commercial” dairy farm and not on the subsistence farmer.

Besides the €26.4 million in potential foreign exchange savings by increasing farmgate sales of milk there is also benefits in increased employment and increased revenues generated by all the businesses that are servicing the dairy industry. If over a 5 year period the current imports of dairy products are displaced, an estimated additional 2,333 mt a year of processed products per firm will be made. To the individual firm this means they are producing an increased output of high value-added products such as yogurt and they will be receiving additional gross revenue of approximately €1.75 million. To manage this level of production increase it is estimated that an addition 90 employees will be needed using the processors current per liter

employee ratio. This increase in employment is only at the processing level, it is assumed that similar employment increases will result in all sectors working within the dairy cluster.

3. POULTRY, FEED, AND OIL SEED CLUSTER

a. Market Situation

Rationale for combining the poultry, feed millers, and oil seed into a single cluster.

Poultry feed can constitute over 70 percent of the cost of producing a table egg and if the feed is not of the highest quality (meets the daily nutritional requirements of a particular breed of bird) production will suffer to the financial detriment of the enterprise. Crushed oil seeds such as soybean and sunflower provide a meal with relatively high levels of crude protein that is important for livestock growth and production. Increased demand for quality feed products for the poultry and other livestock will encourage feed millers and oil seed crushers to promote local production of these commodities and help ensure the provision of low cost feeds. Therefore, we propose that we foster the business relationships amongst poultry producers, feed millers and oil seed crushers in order to ensure the success of these “linked” businesses.

Poultry industry.

The primary poultry production activity in Kosovo is table egg production and the rearing of replacement stock (pullets) for the table egg producers. There are also several hatcheries (incubator facilities) and a newly formed broiler grower and slaughter processing facility. In 2001 there were a reported² 218 table egg producers in Kosovo (141 Albanian and 77 Serbian) with an estimated total capacity of about 447,000 layers. This would suggest an average size table egg farm of 2,050 layers. There is, however, an abundance of a “typical” layer house with three tiered cages that hold 3,600 layers. The 3,600 layer size building is therefore considered your typical table egg producer in Kosovo.

If we assume, for the ease of calculation, a total flock size of 500,000 layers that produce on average 260 eggs over a 12 month production period. This means that 130,000,000 eggs a year are produced in Kosovo, or 10,833,333 per month or about 361,000 table eggs per day. On the demand side, we can make a conservative estimate of consumption of 0.8 eggs per capita per day. Variation in egg consumption around the world depends on many factors such as availability, cultural preferences, size of food processing industry, number of substitution products, and disposable income. For example, on average the per capita consumption of table eggs is 296 per year in Czech Republic, 308 per year in Mexico, 320 per year Japan, and 252 per year in US. If we assume a population of 2 million inhabitants in Kosovo and a 0.8 eggs per capita consumption rate, then we would derive a potential demand of 1.6 million eggs per day. Demand includes processing of eggs into pasta, bakery products, etc., as well as direct consumption. Therefore, Kosovo table egg producers are providing only 22.6% of the potential demand.

The exact quantity of table egg imports into Kosovo is not known. However, if we assume a 25 ton truck can transport 900 cases (12 flats of 30 eggs = 360 eggs per case) or 324,000 eggs per truck. One truck a day on average would supply almost the equivalent of local production (361,000 eggs) or about 20% of potential demand. If two trucks a day, on average, then 40%, etc. It is safe to say that the market for fresh table eggs is under served and the potential for table egg enterprise development is substantial.

² EU Monetization report

Table egg distribution by individual producers is largely local. Flats of eggs are taken to local periodic markets and sold directly to consumers. Some clients such as owners of grocery stores, restaurants, and small traders fetch the eggs at the farm. Least often, sales are made under contract to institutions such as schools.

Interviews with the director of KONI, the largest table egg importer (560,000 eggs per week) and one of the largest table egg producer (45,000 layers) revealed the following information regarding the table egg market in Kosovo. Koni began operation in 1990 by selling egg flats on the street corners of Pristina. Today, their distribution network in Pristina is comprised of four stores that sell both wholesale (by the case) and retail (by the flat of 30 eggs), and 2 egg kiosks that sell retail near the blocks of apartments. The stores sell on average 60 cases (21,600 eggs) per day and the kiosks sell on average 5 cases (1,800 eggs) per day. There is the possibility to expand the number of kiosks to five, in that, being close to the consumer is important for sales to increase. All outlets are serviced by their own trucks. This firm also contracts with distributors located in the major cities of Kosovo.

Koni imports table eggs from Albania (mostly), Macedonia, Turkey, Bulgaria, and Croatia. They follow market prices in these countries, that are affected by high and low demand periods due to religious holidays, and thus buy in those countries where prices are lowest for a particular period of time. The current market in Kosovo is 50% for brown eggs and 50% for white eggs, whereas three years ago the market only contained brown eggs.

Koni estimates the current rate of consumption to be about 800,000 eggs per day. With local production contributing about 375,000 eggs per day and imports totaling about 425,000 eggs per day. This would suggest that imports by Koni are about 20% of all imports.

It is important to note that there is no hatching egg production from parent flocks in Kosovo and thus force poultry producers to import either day-old chicks for rearing or 17 week old replacement pullets to place directly into production facilities. Also, there are at least three hatchery operations in Kosovo that import hatching eggs, at an extremely high cost, however the incubators are currently closed due to the unreliable electricity situation. At least two of the hatcheries contain brand new incubators and hatchers and the owners have been trained in basic hatchery management techniques.

The live spent hen market. Laying hens are usually liquidated in Kosovo after 12 months of production (about 72 weeks of age) and there seems to be a considerable market demand for these tough old birds. Spent hens are used by poorer households for soup and/or to start a small backyard flock. Specialized traders of spent hens usually contract with the table egg farms for the sale of the entire flock over a period of days. They will negotiate a price per bird (about 1.5 Euros per bird) and a removal schedule of up to one week. A small truck with cages will carry a load to the periodic green markets and sell the spent hens for about 2.0 Euros per bird (depending on size).

Feed industry

The feed milling situation in Kosovo is composed of about 12 private millers, 3 cooperative millers, and 2 large state owned enterprises. The private millers are generally newly formed partnerships that are tied to table egg production. Table egg production is the primary business of the private feed millers as they strive to minimize the production risks associated with poor quality feed, the possibility of the absence of feed, and the high price of imported feed.

The 3 state owned cooperatives (Istog, Ferizaj, and Stanisor) utilize small milling equipment owned by the cooperative to produce feed for members and by contract. The cooperative feed mill in Istog is reportedly closed. The 2 state owned feed mills (Fushe Kosovo and Kline) are in the same dismal state of uncertainty as many of the other state owned enterprises in Kosovo. Their current level of production in Fushe Kosovo is at a small fraction of total capacity and the feed mill in Kline is closed.

The private producers (and cooperative producers) utilize small scale milling and mixing equipment with, typically, 2.5 tons per hour milling capacity. Feed ingredients are purchased from traders (importers) in 50 kg sacks and stored in sheds at the feed mill. Basic formulas (not least cost formulation) are followed with ingredients being weighed on small platform scales and hand fed into the grinders. These private millers understand the importance of feed quality and are willing to pay a premium for imported mineral and vitamin premixes from Italy, and calcium phosphate from Serbia. High protein soybean meal is historically imported either by private traders, however, more recently 50 kilogram sacks of soybean meal has been made available to livestock producers through USAID monetization activities. Limited amounts of sunflower meal, is available from the oil seed crushing plant in Fushe Kosovo. It is estimated that 10% of the feed grade corn used in poultry feed is sourced in Kosovo and 90% imported, mostly from Serbia. The domestic corn is viewed as a poorer quality feed ingredient relative to imported corn, due to high moisture content.

The state owned feed mills have considerably more milling capacity than is required for the entire livestock sub-sector. The current ownership structure and dismal state of operations in these feed mills is, perhaps, the single most important constraint on livestock development in Kosovo. The privatization of at least one large feed mill into the hands of competent entrepreneurs who are ready to produce certified high quality livestock feed could have a dramatic effect on livestock production. A consistent supply of quality feed at a fair market price is paramount to the success of the livestock sub-sector.

The evolution of the small-scale poultry and feed mill industries is a direct effect of the collapse of the state managed system and the former central planning methods of the previous government. The entrepreneurs in Kosovo should be given credit for their hard work and enterprise development initiative that has led to the success to date (growing slowly and making profits) despite considerable constraints on their business development.

b. Constraint Analysis

The following findings were derived from the agribusiness competitiveness assessment data set. Entrepreneurs-identified constraints and opportunities listed below were derived from surveys completed by 36 poultry producers and feed millers.

General information:

General findings: Average number: 9 years in business; 8 full-time workers (5 male and 3 female); 5 part-time workers; 39% have at least one computer; 14% have access to the internet; 37% are located in a town/village and 34% in rural areas; 51% started business from scratch; 40% took over a family business; and 89% are classified as a personal business enterprise.

Social responsibility: 71% of the respondents provide childcare, meals, transportation, and minor medical payments.

✂✂*Environmental issues*: 42% do not use energy conservation methods or keep environmental records; 69% dispose of solid waste themselves; and 48% have received environmental or health/veterinary fines

✂✂*View of the economy*: 57% view the economy as growing moderately

✂✂*View of the future*: 61% view sales next year to be average; 64% view the economy next year as average; and 88% view the quality of their product next year to be above average.

Entrepreneur-identified factor conditions:

✂✂*Raw agricultural materials*: 50% source raw materials from small farmers and association/cooperatives; 29% source from traders

✂✂*Problems with raw materials*: 62% identified uncompetitive and extremely variable prices as the major raw material problem; and 15% have problems with quality.

✂✂*Inputs (chemicals, etc.)*: 51% source inputs from traders or import directly themselves;

✂✂*Assistance from suppliers*: 47% do not receive any form of assistance; 31% receive technical advice; 12% receive flexible payment schedules; and 6% receive forms of credit.

✂✂*Source of information on technology*: over 55% receive advice from other firms or by observing other firms; 14% receive advice from suppliers

✂✂*Source of primary job skills*: over 75% receive training from either former job experience or on-the-job training. Less than 10% received training from universities or public training institutes.

✂✂*Land ownership*: Nearly 60% of respondents do not have any land problems; when they do, 65% say there are high registration fees and no means for dispute resolution.

✂✂*Technology*: 41% view availability of technology as being below average; 60% view availability of technology as average or above; 94% view the cost of technology as average or above; 76% of existing equipment is less than 10 years old.

✂✂*Infrastructure*: 58% of the respondents identify road conditions as below average; 100% view trains access and availability as a problem; 57% view availability of electricity as below average; 90% view the availability and reliability of communications as average and above average.

✂✂*Investments*: 42% of the respondents have made investments in their company to take advantage of sales growth and 36% invest to raise efficiency with modern technology; 27% identify high interest rates as an obstacle to investment, 32% identified the lack of own finance or lack of access to finance as a major obstacle to investment.

✂✂*Human resources:* 56% of the respondents viewed the availability of unskilled labor as above average; 38% viewed the availability of skilled labor as above average; 70% viewed the quality of skilled and unskilled labor to be average.

✂✂*Natural resources:* 78% viewed the availability of water to be average or above average; 95% viewed the availability of fuel to be average or above average; 81% found land availability to be average or above average;

Summary of factor conditions. Poultry respondents have identified the following factor constraints: Variability and uncompetitive prices for raw agricultural materials (mostly feed grains); poor quality local feed grains; poor infrastructure (roads, rail, and electricity); limited owner finance possibilities; limited access to banking and high interest rates; high cost of modern technology; and limited sources of information.

Entrepreneur-identified demand conditions:

✂✂*Marketing:* 40% identified lack of finance for marketing as a major obstacle to market development; 20% identified no information on domestic markets, and 14% identified the quality of products. Also, 50% of the respondents view importers as their main competitors; 28% view similar companies as their main competitors.

✂✂*Export constraints.* 82% of the respondents identified above average border difficulties, with 71% above average difficulties at the Macedonia border and 56% identified above average difficulties at the Montenegro border.

✂✂*Primary customers:* 39% identified households; 33% retail stores; and 11% traders from the same municipality; 8% traders from outside municipality

✂✂*Market knowledge:* 36% do not know their indirect customers' selling price or only the price range; 44% always know their indirect customer's selling price.

✂✂*Products:* 83% view their products as above average quality; 70% view products as healthy;

✂✂*Market locations:* 46% of respondents market their products inside their own municipality; 29% outside municipality; and 21% market to wholesalers; the average distance to primary domestic market is 15 kilometers and 37 kilometers to secondary markets.

✂✂*Customers:* 56% of respondents identified ordinary customers as their major customer; 14% identified customers who are willing to pay for high quality; 25% say they provide individual customers service, 22% provide fast delivery; and 19% provide certified quality documents; 14% sell at the lowest price.

Summary of demand conditions. The poultry respondents have identified the following demand constraints: A lack of finance and market information constrains marketing plans; Customs regulations and procedures constrain imports and exports into neighboring countries; Marketing services are largely limited to local municipalities; market segmentation is not practiced to any degree; knowledge of market conditions outside their local markets is quite limited.

Supporting industries and collaboration:

- ✂✂*Transportation:* 57-58% view availability, reliability, and cost of transportation to be average;
- ✂✂*Financial institutions:* Respondents view the availability of banks (44%) below average and 36% average; 57% view the cost of banking services to be above average.
- ✂✂*Input suppliers:* Respondents view the availability (69%), reliability (64%), and cost (67%) of input suppliers as average.
- ✂✂*Academic institutions:* Respondents view the provision of information by universities (68%) as below average; and 74% view the provision of research information by universities to be below average.
- ✂✂*Clustering:* 100% of the respondents said they receive below average assistance from local governments; Only 25% of the respondents indicated that their collaboration with other firms is above average; and when those few who do collaborate, they identified joint production collaboration (64%) average and above average; sales and marketing (54%) average and above average; and transportation (62%) average and above average.

Summary of supporting industry and collaboration conditions: Poultry respondents identified the following constraints: The provision of information from academic institutions is very limited; Poultry producers receive no assistance from local governments; collaboration with other firms is very limited; and financial institutions are not available and costly.

Consultant-identified technical constraints on table egg production.

- ✂✂No source of hatching eggs in Kosovo. Imported hatching eggs are expensive and hatchability decreases with increased distances adding costs to the final pullet. There are no parent farms for the production of hatching eggs in Kosovo.
- ✂✂There are only three hatcheries and all are currently closed due to unreliable electricity, thus limiting the source of replacement stock. This also adds to the cost of producing table eggs.
- ✂✂Expensive, poor quality feed, and limited quantities of feed from Kosovo SOE feed mills.
- ✂✂The use of standard breeds (synthetic strains) of brown egg laying hens that are not as productive as other brown layer breeds and much less productive than white egg layer breeds.
- ✂✂Limited technical and management knowledge.
- ✂✂Absence of market and technical information.
- ✂✂Limited willingness to collaborate on sourcing and distribution

Consultant-identified technical constraints on feed milling

- ✍✍ Limited domestic source of corn (energy source).
- ✍✍ High cost of feed ingredients (minerals, vitamins, and protein) due to purchasing of small quantities (50 kilogram sacks), and taxes on imports.
- ✍✍ Limited on-farm storage capabilities for bulk (silo) storing of feed grains.
- ✍✍ Underutilized feed milling capacity.
- ✍✍ Distribution limited to neighboring livestock producers.

Consultant identified opportunities:

- ✍✍ Strengthening knowledge of customers; corporate image; business process. Market segmentation; product differentiation; improved packaging; new market distribution channels; and increased collaboration.
- ✍✍ The understanding of product quality is a major issue with all respondents believing they have the highest quality products on the market. Developing a realistic understanding of quality and market segmentation will be an important activity for project implementers.

c. Development of a Poultry, Feed, and Oil seed Cluster Strategy

KBS agribusiness team will develop poultry producer strategies that will focus on operational efficiency objectives, bio-security and vaccination programs, feeding programs, and marketing of products. Table egg producers require a source of healthy laying stock with specific genetic capabilities, quality feed, medications, reliable energy sources, and markets for their products. The KBS approach begins with the development of an agreed upon strategy that aims at integrating poultry producers and allied industries in order to mitigate constraints in factor conditions, demand conditions, and cluster development.

The integrated approach of the poultry cluster includes assisting feed millers with market development of high quality feed products. This will be accomplished by demonstrating returns to table egg producers (based on actual experiences in Kosovo) from the investment made in properly formulated complete feeds and feed concentrates. Similarly, veterinarians will develop, with US volunteer assistance, bio-security and vaccination programs. Input suppliers will demonstrate practical solutions to packaging, the value of improved genetic stock, and the use of appropriate technology.

This approach strives to integrate allied industries to help poultry producers overcome constraints in factor conditions and increase important information flows through collaboration.

d. KBS Participants

- i) Poultry producers
- ii) Feed millers
- iii) Veterinary services
- iv) Grain collection and transportation services
- v) Input suppliers (equipment, packaging, appropriate technology)

e. KFS Production support activities (coordinated with KBS)

- i) Feed grain production
- ii) Assistance to associations for sourcing and purchasing of bulk feed ingredients
- iii) Working capital assistance for feed millers

f. Poultry and feed milling cluster working group

- i) Members include: Feed millers, Oil seed crushers, Poultry producers. This working group will be a committee of the Poultry and FeedMillers Association.

g. Working group activities

- i) Poultry and feed industry strategies
- ii) Collaborative sourcing
- iii) Food safety and quality

h. Mitigating Demand Constraints -

Improved access to information

✍✍Provision of market opportunity assessments. Current information on imports of poultry products, market price information, and potential institutional contracts will be made available to poultry cluster participants through the working group.

✍✍Assisting input suppliers with the development of enhanced information products. For example fact sheets on the proper use of poultry supplies, equipment, medications, and feed additives can be developed by U.S. volunteers and distributed by input suppliers and through the working group.

Productivity enhancing activities.

KBS agribusiness technical management improvement activities (in association with normal KBS consulting services) will focus on operational efficiency measures:

✍✍Production records will be kept by participants in a manner that will facilitate benchmarking of key technical coefficients to international standards. For example, mortality, feed efficiency, and percent production. This task will establish clear technical targets for the producers which will encourage efficiency and potentially lowering the cost of production.

✍✍Layer management programs. For example, a culling program is the proper removal of non performing birds. Culling can increase production efficiency, by lowering the feed required to produce an egg on a flock basis. Also, extending the laying period beyond 12 months either for an additional month or force molting the flock to bring back production for several months or more.

Quality enhancing activities.

- ✍✍ Table egg producers in Kosovo claim that consumers prefer table eggs from Kosovo because they are fresher. This fresh egg quality characteristic can be used in product awareness campaigns promoted by the working group.
- ✍✍ Further quality improvements may be possible through improved grading and packaging measures. At the moment, eggs are sold on flats of 30 eggs of mixed weights. Grading eggs and distributing the larger eggs to segmented client base would derive a premium for the additional labor efforts of grading.
- ✍✍ On-farm egg quality assurance programs will emphasize the importance of quality feed to ensure animal health, vaccination programs to control disease, and egg washing/sanitizing to limit the spread of contaminants. Food safety is very much on the mind of the consumer and must become a focal point for table egg producers as well.

Market distribution strategy.

- ✍✍ As firms grow beyond their localized distribution networks the need for cold storage to extend the shelf-life of eggs will increase in importance. Many poultry producers will not evolve to a scale that justifies storage facilities because they are liquidating their inventory on an almost daily basis. However, the larger egg producers, especially those without significant distribution networks of their own, will require cold storage to extend the shelf life of their products.
- ✍✍ Development of distribution channels for marketing outside local municipalities. The large distributors of eggs have a well developed distribution system that could provide smaller producers with the market access they don't currently have. This will require a contract relationship between the distributors and producers. Trust - is the operative word in developing such a relationship and it will take time to develop meaningful trust between such parties. KBS can play an intermediary role (honest broker) in the contract negotiation process and provide both parties with economic information that demonstrates that a contract is in both parties interest.

i. Mitigating Factor Constraints -

- ✍✍ *Cost accounting.* KBS accounting team will work with cluster participants on cost accounting systems. This information will enable poultry and feed producers to understand their true margins and future investment planning. Respondents claim they are profitable, but it is doubtful if they understand returns to labor or margin management.
- ✍✍ *Sourcing:* Bulk purchasing of feed ingredients, including micro ingredients, is the best way to lower total feed costs for poultry producers. This could be accomplished through the working group or identified groups of poultry producers in a particular geographic area. KBS will investigate the possibility of developing such an arrangement and the potential economic benefits of doing so.

j. Mitigating Constraints on Cluster Development -

- ✍✍ *Collaboration:* See approach to collaborative sourcing.

4. FRUIT AND VEGETABLE CLUSTER

a. Market Situation

In the development of the fruit and vegetable strategy for the work plan considerable reliance was made on documents previously compiled by the Food and Agricultural Organization of the United Nations (FAO), ARD-RAISE Consortium and Inter-cooperation Swiss Organization for Development and Cooperation. Further, interviews were conducted with individuals involved with the major processing plants and organizations involved with the development of the produce and horticultural sector in Kosovo. A helpful source for additional information on each particular product is the Kosovo Sub-sector Review of Fruits and Vegetables published by the Department of Agriculture, Forestry and Rural Development (DAFRD).

Production of Fruits and Vegetables

Before the conflict, the farm structure in Kosovo, like in other parts of ex-Yugoslavia, was characterized by two very distinct farming systems. State-owned enterprises (SOEs) operated large scale agricultural farms and small privately owned farms. Historically, a large amount of small private farmers existed. It is estimated that some 100,000 rural farm households are now engaged in farming activities. The average farm size is estimated at 3.22 ha, not including large areas of communal grazing lands, which are estimated at 2.55 ha per farm (FAO/WFP crop and food supply assessment). The concept of a “farm-household” is especially imprecise under Kosovar conditions, because several families often live together in one compound. Apart from agricultural activities, a rural household frequently engages in other economic activities, such as, crafts, construction and trade. A good example of this is a medium size dairy farmer that owns the gas station in front of his farm, restaurant and trucking company all working together to produce income for the “household”.

Under the previous government the SOE’s received all the attention and the private farming sector received little attention from the State. Investments and the technological transfer to the private farms were very low. The centrally organized cooperative system, Agro-Kosovo provided inputs, machinery and marketing channels to the small farmers. Because of this history the typical farm is between 1-5 hectares (more than 90% of farmers had less than 5 hectares) in size and includes a wide range of agricultural activities, including milk, meat, wheat, maize, vegetable and fruit production. Production is primarily oriented to meeting the food requirements of the family with the excess sold directly in the market or at the farm-gate to wholesalers.

On land where farmers produce mainly vegetables for the market they also maintain other activities, like milk and wheat production, to spread the workload over the year, for agronomic reasons (crop rotation) and to ensure the subsistence needs of the family. This system provides the farming system with relatively stable farm income under adverse economic conditions. However, the farming system is not competitive in purely economic terms. Because the farms are small, they are not specialized and work with few inputs that can maximize production. The crops being grown here in Kosovo are all the traditional products for a country with such climatic conditions. The most popular vegetables are: tomatoes; peppers; potatoes; cucumbers; cabbages; onions; beans; peas and others. Fruits are also cultivated, particularly in the regions surrounding Jakova, Rahovec and Peja. Apples used to be the major crop, accounting for hundreds of hectares of plantations run by the state cooperatives. Other traditional crops are wine grapes, peaches, pears, cherries apricots, berries and plums.

The majority of agricultural land is in crops with very little currently in orchards or vineyards. Adding up the different categories of land use, about 383,000 ha or 66% of the agricultural land is used for livestock production. Of the cropland the majority is planted in wheat and maize rather low value crops with only 10% of crop land planted in high value vegetables. Vegetables and fruit cover only a small area (about 30,000 ha vegetables and about 5,000 ha fruit) but have a much higher yield (per ha). There are about 8,000 ha beans, 6,000 ha potatoes, 4,000 ha peppers.

Table 1. Production of Selected Crops, 1991-1996

Crop		1991	1992	1993	1994	1995	1996
Potatoes	Area	8,518	8,720	9,109	9,488	9,914	10,670
	Production	89,354	72,367	60,711	75,885	89,216	83,202
	Yield, t/ha	10.49	8.30	6.67	8.00	9.00	7.80
Cabbage	Area	2,330	2,452	2,520	2,596	2,743	2,855
	Production	28,405	23,905	24,573	26,217	29,125	32,833
	Yield, t/ha	12.19	9.75	9.75	10.10	10.62	11.50
Onions	Area	2,573	2,440	2,542	2,583	2,800	3,082
	Production	15,922	14,120	11,289	12,644	14,162	14,890
	Yield, t/ha	6.19	5.79	4.44	4.90	5.06	4.83
Paprika	Area	3,137	3,057	3,153	3,220	3,175	3,764
	Production	26,846	22,359	22,178	25,934	24,155	30,752
	Yield, t/ha	8.56	7.31	7.03	8.05	7.61	8.17

(ECSSD Report, p.9)

Fruit Farm Composition

Fruit farms as such do not really exist outside the SOE's. Plums or apples are the main orchard type fruit grown in farmers "backyards". It is possible to find areas where cherries are grown with enough surpluses to be sold on the open market. Formerly pears were also a major crop but are not grown in a large quantity now.

In general fruit crops occupy a much smaller area of the average farm than vegetables. There are no known farms that generate their income from fruit production only. The level of management of these orchard crops is not high and many common techniques of modern orchard practice are not practiced here.

Under present conditions, little if any purposeful fruit cultivation is carried out. Small, piece-meal orchards, under low level management are the only ones now in existence. Farmers complained of the fact that good planting material is not available and that the cost of establishing an orchard is very high considering that there is little or no product for the first 3 to 4 years, depending on what fruit is planted.

Of a total of 19.3 ha nearly half were plum orchard just more than a quarter apple and 10% pear; other fruits were of minor significance. Plums, the most significant crop are the easiest to grow, they can be used as fresh fruit, used for fermenting alcohol (plum raki), for making jams, and preserves. The processing possibilities are higher for plums than for other fruits because of their fresh market value and processed value. Apples, if cultivated correctly, needs specific pruning and can require complicated high-caliber management.

Irrigation

It is projected that by 2006, some 51,314 ha of rehabilitated irrigation can be put into use¹ although currently it is estimated that not more than 20,000 ha of previously developed irrigation is in working order. Traditional systems in Dukagjini valley are well organized and collaborative. It is apparent that groundwater resources could be considerable, but apparently no known survey exists. These irrigated farms have the most potential to grow a wide range of high value agricultural products but normally still display the small farming subsistence structure.

Market Situation

Most marketing takes place by the individual producer offering his goods in nearby town centers. Visits to weekly markets in Peje, Gjakove, Prizren and the wholesale market in Pristina indicate that the most common vegetables (white peppers, tomatoes, potatoes, cucumbers, onions) were available in surplus everywhere in August at low rates, about which producers often complained.

All marketing of locally produced fresh fruits and vegetables is currently carried out by the private sector through wholesalers stopping at the farm-gate and picking up the farmers produce or the farmer taking the product directly to the market. Generally, the price is negotiated by the farmer and the wholesaler at that time and the farmer is paid cash for his produce. Little attention appears to be paid to quality issues while imported and local produce are sold alongside each other. Currently, there is minimal grading and sorting of the produce by the farmer before it is sold to the wholesaler. Further, the wholesaler does little grading and sorting before presenting the product to the final consumer. Therefore, product that is not of the standard for the fresh market goes all the way into the market and is then tossed out by the wholesaler gaining him and the farmer no benefit instead of being sold to the processor at a reduced price.

Local Buying Habits

Purchases of fruits and vegetables represented approximately 36% of the total food budget (of 433 €, on average, per month per household). The purchase of processed fruit & vegetables is about 25% of the overall food budget. When purchasing fresh fruit and vegetables, consumers mainly care about price and freshness (cleanliness and taste were deemed less important). 35% of the population buys special fruits and vegetables for special occasions denoting the presence of a niche market. 95% of those surveyed claimed that they would not buy imported products if a local alternative were available. Most consumption is oriented towards summer F&V: 29% of the population was familiar with winter vegetables suggesting cauliflower and broccoli, for example, may also have niche markets. Dried fruits are traditionally quite common.²

Of all annual consumption of fresh vegetables, the most popular items were tomatoes (16.7%) and peppers (15.8%), followed by potatoes, cucumbers, cabbage and beans (ranging from 9.5% down to 7.7% of all fresh vegetable consumption). For fresh fruit, the most popular items were apples (comprising 17.4% of total fresh fruit consumption), bananas (13.6%), followed by peaches, strawberries and oranges (where the data for all three show almost 50% less

¹ See EFRP, CBC, Water Resources Study.

² Swiss Project for Horticulture, Consumption Habits and Purchasing Behaviors for Fruits and Vegetables in Kosovo, September 2001.

consumption than bananas). Of all annual consumption of processed fruits, peaches were most popular with a 16.7% share, followed by apples (12.5%) and strawberries (10.4%).

Imports of Fruits and Vegetables

It is estimated that somewhere between 30 and 50% of the fruit and vegetables consumed are of imported origin. This indicates that there is a large untapped market for locally produced products that can be price and quality competitive. It appears that there is some additional 3000 to 5000 ha of cropping that if restored would put production on a level with that of pre war times. Natural resources do not constrain future production levels. Soils and water exist in combinations that could be developed to provide substantial increases in production, particularly in the summer seasons, where growth is less constrained by climatic conditions. The wholesale price for produce reflects the downward pull of imported products on most categories. Further, there is a large seasonality of price variability some products. The price variability of some products shows that some products prices maybe price competitive for processing during a limited time of the year.

A considerable amount of imports is required to satisfy domestic demand. Most products are imported from Macedonia, due mainly to two factors: the favorable taxation regime between the member countries of the FYR that imposes an import tax flat rate of 1% on all exchanged products; and the advantages offered to traders in the region in receiving payment in a high value currency in Kosovo. The imported fruit & vegetables into Kosovo between January and December 2000, 60% came from Macedonia, 24% from Greece, 10% from Turkey, 3.32% from Bulgaria, 1.55% from Yugoslavia and 0.50% from Hungary with 0.79% from other countries. (Customs Authority).

The total value of imported fresh vegetables and fruit in the year 2001 was about €13,551,458 with tomatoes being the largest single imported vegetable item at about €679,503, then onions €365,995 and then peppers €235,214. For fruits bananas was the single largest import at €3,372,558, then watermelons at €743,744 and then apples €379,997. A total of €30,295,423 of processed food products were imported during the year 2001 with €11,928,030 of prepared foodstuffs being imported followed by juices at €9,825,029 and then beverages at €8,523,572. Prepared foods includes, but is not limited to, processed cereals, pasta, canned goods and some dairy products.

b. Constraint Analysis

Fresh Fruits and Vegetables Market

Kosovo's fresh fruit and vegetable market exhibits seasonal price fluctuations that are normally associated with the produce industry in other temperate production regions. The bulk of the local vegetable crop is harvested and sold in the June-September time period. The mean Pristina wholesale price in 2001 for tomatoes during this time period is €.375/kg, for sweet pepper €.425/kg and for onions €0.31/kg. (Source Swiss Project for Horticulture Promotion-Kosovo) Further, the farm-gate price during that period was €0.17/kg, €0.20/kg and €0.25/kg respectively. This demonstrated that Kosovo's farmers are receiving about 50% of the Pristina wholesale market prices during the peak production season. This is not an unusual price differential and is similar to world standards indicating that the distribution system is working in a reasonable efficient manner. This differential may be narrowed by the introduction of quality standards that would reduce the cost to the wholesaler of transporting wasted produce to the market and allow the farmer to sell graded produce to the wholesaler and processor.

Processing

Most fruit and vegetables produced are sold directly to consumers. With respect to processing and marketing, a few processors in fruit and vegetables have emerged out of the SOEs. Some new private local juice makers were visited displaying excellent technology. Like with other sectors of agriculture the **processing capacities, in general, far exceed the local production and market needs**. The major constraints to the development of the processed fruits and vegetables sector are: insufficient product availability; outdated processing technologies; poor road infrastructure; comparatively high production costs (particularly due to comparatively high energy - electricity and fuel - charges); and high costs of packaging materials.

There are very few large state-owned processing units that are no longer in operation which formerly consumed much of the surplus. These units were sometimes combined with some primary production, sometimes with some storage capacity, such as in the cases of Progress enterprise in Prizren, Minex and the Oil mill in Ferizaj, Agroprodukt and Agrokultura kombinat components in Gjilane, Kamenica and Silovo/Shilove. These units were equipped with machinery designed to process large quantities of the same product quickly. This helped to absorb production peaks but makes made the facilities inflexible causing them to stand idle for much of the year.

Currently the only vegetable processor in Kosovo is **Progress** in Prizren. The line for pickled vegetables has a capacity of 5000 jars/h of 750 ml each. At present, it produces 30% of capacity. Current processing capacity is able to absorb large amounts of vegetable production, however, there appears to be a lack of market demand for their production.

When operating at full capacity, existing processing facilities will be able to handle increasing amounts of horticultural output if markets for the product are obtained. All facilities have cleaning, packing, storage and filling devices of varying capacity and design which are in working condition but remain idle. Plant management say they are willing to allow third parties to use the facilities on a contractual job basis.

At least three small businesses have packaging facility for hot pepper powder and one for vegetable broth and there is also a herbal tea packing venture in Peje. The new companies, Frutti and Fruti, which are processing only imported fruit juices are producing their own electricity. All companies, excluding Frutti and Fruti, have equipment which is more than 15 years old.

All food processors declared that they imported at least 70% of the raw material for their production needs and at least 90% of the packaging material. The two fruit juice processors and the soft-drink producer imported 100% of the fruit concentrates that they required.

Storage

There is virtually no cool or cold storage capacity in use with the exception of a deep freezing unit at **Progress**. Other large state-owned storage facilities exist but are out of operation. No private cold storage appears to be available. Total cold storage capacity identified in Kosovo is estimated between 10,000 and 20,000 mt. With a conservative estimate of 20 mt of output per ha this covers 1.8 to 3.6% of the vegetable area and is therefore by no means sufficient. The consequence is heavy fluctuations in vegetable and fruit supply and prices showing seasonality of production so that by late August, prices have already declined with respect to July prices.

c. Development of a Fruit and Vegetable Cluster Strategy

Import Substitution Strategy

Any import substitution strategy must be developed within a future export market approach. Specific products with comparative advantage in the regional/European area that can compete in price and quality must be identified and produced. Any investment in the fruits and vegetables sub-sector has to take into account the necessity of integration of the food chain for these specific products. KBS can assist in supporting the agri-business in each step of the production and processing chain in securing credit, obtaining reasonable access to high quality inputs for agriculture producers and processors, training in classification, grading and labeling of produce, identifying new marketing opportunities, improving processing efficiency and productivity. KBS can assist the processor or farm group to evaluate if the products should be sold mainly as fresh or processed product in order to be sure that the product is going into the most profitable marketing channel.

KBS and KFS can implement an overall fruits and vegetable sector strategy:

- ?? To increase fresh vegetable production and extend the harvesting season
- ?? Diversification of production
- ?? Utilization of greenhouses
- ?? Production of winter resistant vegetables
- ?? Adoption of technology packages (seeds, production techniques, period of planting, sizing of the products, labeling etc...)
- ?? Rehabilitation of irrigation system and good management by water user associations of the tertiary level
- ?? Rehabilitation of fruit orchards with new varieties of fruit trees in order to give higher profits to farmers and provide the best fruit for fresh market and processed market
- ?? Investments in fruit juice and concentrate production improving the profitability of local juice makers
- ?? Access by the urban population to good quality products, better classification, and labeled and at a competitive price with imported products
- ?? Assist the processors develop farmer advisory services
- ?? Development of small fresh fruit and vegetables collecting centre for wholesalers and processors
- ?? Access to credits to fruits and vegetables processors on the basis of viable business plans
- ?? Development of the processing capacity for new products such as juices, jams, teas, and fruit based beverages, etc.
- ?? Investments in packaging/labeling and material for fruits and vegetables producers improving the fruit and vegetables processors' profitability.

Domestic market development is critical for the future of the Kosovo fruit and vegetable sector. During the war period, Kosovo lost its traditional markets of Serbia and to a large extent to its own home market. The Serbian market may never be reclaimed, but as much as possible of the home market should be recovered. During the main production period it should be possible to grow quality vegetables for the home market more cheaply than the cost of importing fresh produce from neighboring countries. Not only should this be possible in the main part of the season, but it should also be possible to expand the home market by displacing foreign produce from the early season market, periods that are traditionally taken by produce from the warmer southern countries. While there are some climatic constraints, there are also a

number of plus factors. Soils are generally well suited to irrigation and irrigation supplies are ample while farmers have a good track record with regard to fruit & vegetable production.

The KBS project will assist and advise clients on developing products for the specialized markets, extending production seasons, introduction of new crops and application of new technology. In order to take over the early and possibly some of the late season market it is necessary to think in terms of protected cropping. Using various new technologies for extending the season it is possible to think in terms of capturing up to 6 weeks of the early market for fresh vegetables. It should also be possible to extend the late season produce for a period of weeks but this poses different and more difficult problems compared to those of the early season market.

Early season market displacement of imported goods is a first priority and plastic culture using polythene tunnels (poly-tunnel) is the best way of achieving this. The skills and technology for the production of vegetable crops from seedlings rather than seed should be the main method of producing the first late spring/ early summer crops. To do this, a range of Polythene houses need to be used, strictly to provide the correct protected environment for seeds to germinate, be 'pricked out' or planted on into 9 cm pots for standing out in the houses. In this condition they can be kept for up to 3 weeks before they are planted out in to the poly-tunnels. Swiss Inter-cooperation is encouraging farmers associations to use the polythene house culture. KBS will provide services to the associations to learn how to properly run their new business and to market their products. Private companies will be assisted by KBS to provide the materials and technology to set up a proper green house.

A totally new approach to the market is recommended, whereby the early, main and late seasons are specifically targeted through the choice of type and variety of fruit. In addition the process markets should be targeted at specific varieties of both soft and top fruits for the preserve, juice, and cider markets. KBS agribusiness team will develop strategies that will focus on improving management and marketing of horticultural products. The KBS approach begins with the development of an agreed upon strategy that aims at integrating fruits and vegetable producers and allied industries in order to mitigate constraints in factor conditions, demand conditions, and cluster development.

The integrated approach of the produce cluster includes assisting input suppliers with market development of high quality inputs and seed products. This will be accomplished by demonstrating returns to producers using high quality seed and inputs. KBS will assist input suppliers to demonstrate practical solutions to packaging problems, the value of improved plant varieties, and the use of appropriate technology for production and processing. Demand for produce will be developed through an improved market distribution strategy. This approach will integrate allied industries to help producers overcome constraints in factor conditions and increase important information flows through collaboration.

Quality Improvement Strategy

The survey of the green markets indicated that the level of prices for locally produced produce is competitive compared to imports, however, imports are generally of higher quality. The majority of Kosovo's produce is harvested and brought to market with only a limited amount of sorting and grading. There is also limited packaging of the produce in ways that would add value, reduce post-harvest damage and preserve shelf life. The lack of post-harvest handling and infrastructure, such as simple pre-coolers, cool rooms, and consolidation points, packing houses, nut hulling and shelling plants, are also constraints. In the nut business the limited

supply of raw materials makes the feasibility of financing the fixed capital cost of a processing plant difficult without contracted sources of supply. KBS will be working with the agri-processing sector to eliminate these constraints by providing technical and business management assistance.

Agro-Processing Development Strategy

Generally most vegetables grown in Kosovo can be profitable for the farmer when sold on the fresh market. For example the cost of producing tomatoes is estimated to be between .10 and .15 euros per kg (Source: Anadrini Vegetable Association). Progress last year paid only .05/kg or €50 a metric ton for tomatoes delivered to the factory. As a result, farmers view the processing market as “the market of last resort”. Only if the fruit has become overripe or the market is flooded do the farmers sell their fruit to the processor. On the other hand, the processor provides .05/kg more for the farmer’s product than if he was forced to let the tomatoes rot on the ground. From the processor’s point of view, the tomato price is a fair price given the world market price for processed tomatoes. For example, China is currently paying € 34 a metric ton delivered to the processor. It is estimated that tomatoes from China can be delivered to Kosovo for €124 per metric ton under the current cost of production for locally procured tomatoes (Investment Opportunities in Fruits and Vegetable in Kosovo, Policy Unit of MAFRD, April 2002). This same situation exists for all of the major vegetables that can be used for processing.

Given this situation, the processor must increase efficiency of processing and the farmer must decrease production costs. Both these are very obtainable objectives given assistance by KBS and the grants program. Decreasing the costs of production at the processor level can be done by improving processing line layout, using correct processing procedures, and improving the varieties of tomatoes that the processors are buying from the farmer. To dramatically improve yields and reduce the manufacturing costs, Kosovo’s tomato processors should be encouraging the local farmers to plant “low bostwick” varieties of tomatoes. This can only be done by entering into contracts with the farmer guaranteeing them a fixed price for a specific quality of processing tomato. KBS will work with the processor to determine how the contract should be structured, how many farmers will participate, what the costs are for processing and the price that can be guaranteed to the farmer. The KFS through the grant program can help the farmers test new varieties that meet these grading standards and produce the highest yields with the lowest production cost.

Seeds and Plant Breeding Strategy

Farmers are presently constrained by the lack of good quality seed supplies. Farmers generally know of the value of good seed obtained outside of Kosovo and are willing to pay a premium for good quality seed. However, buying the imported seeds is subject to the import taxes placed on imported farm supplies. Unless the import tax laws on farm supplies are relaxed, Kosovo farmers will continue to operate at a disadvantage compared to farmers’ of neighboring countries.

The present value of the seed market has been estimated at €3 million.¹ Seed production is a specialized horticultural industry which Kosovo should be price competitive. There is strong internal demand for good quality vegetable seed as well as rootstock and scion material supplies. Both can and should be produced in Kosovo. KBS will be working with private

¹ Seed Regulatory Services project, November 2001.

companies that are interested in producing these valuable planting materials for the farmer. Technical assistance can be provided in the production of the seeds and market assistance can be given to receive the highest value for certified seed.

Also, KBS will assist local nurseries to work with international seed companies to contract local companies to produce high value seeds. Conditions in Kosovo are good for seed crop production if the management and the organization needs are met. The skill, technology, input materials and ensured market for the production are provided by the international seed companies and the land and labor are provided by the local seed company. This is an ideal product for Kosovo because it is high value with low transport cost. High technology hybrid seed production is a product that Kosovo could benefit from and eventually could make a name for itself in the international market using in local production and developing a future export market.

Seed Potato Strategy

There is a demand in Kosovo for potato seed. This is a special crop that demands hygienic growing conditions, special care and cultural knowledge. The main prerequisite is a land free from the peach-potato aphid, a main vector for various viral diseases and freedom from various eelworm pests.

Last year Dragash area grew only 400 tons of inspected seed potato. The rest of the needs for seed potatoes were imported. The present, poorly supervised, importation of seed potato presents the risk the possibility of importation of a number of devastating diseases. Clean in-country production of good quality seed, produced in areas that are well inspected and supervised for phyto-sanitary conditions, is a hugely beneficial and much preferable way to provide the for the potato seed demand.

KBS can help input suppliers locate providers of seed potatoes from other countries that are certified disease free and the highest yielding for this climate and soil conditions. These seed potatoes can be used to start the seed potato industry here. Further, KBS will provide specialists to assist the input suppliers to put in place certification procedures for the seed potato growers to ensure that they are providing disease free seed potatoes. KBS will then help assist agricultural input suppliers to locate local certified seed potato growers to sell to the market they service. There is no reason why Kosovo should not be producing 100% of their basic seed potatoes requirements (excluding new experimental varieties).

The Nursery Stock Industry Strategy

The nursery stock industry is the least developed of all sub-sectors of the horticultural sector. Nevertheless, the immediate future of this industry probably holds greater growth potential than either fruit or vegetables. Up to 2001, the farms have been growing a small selection of decorative dwarf conifers, some fruit stock mainly grafted on seedling stock and some popular annual flowers. Currently, large polythene houses have built by a number of different companies that will enable them to produce a whole range of different crops to be protected for early planting out and also for various propagation techniques to be used during the winter period.

On the decorative crop side there are plans to supply the first 'western-style' garden centre in Pristina. KBS will be assisting in the planning and implementation of this company. This company and a number of others will capitalize on the already growing and steady trade in,

bare rooted rose bushes. KBS will be assisting in the marketing of these products under new colorful labeling and packaging. There is a plan to build up to 5 more garden centers if the Pristina centre proves to be successful.

There appears to be great optimism in this particular section of the industry, and not without good cause. The Albanian people are known to like flowers and many have small back yard gardens that they cultivate. The availability of locally grown, good quality, well presented plants will be well received. The market at present is probably limited, but should expand if there is stability in the future for Kosovo. KBS will help develop this sector by providing the business with information and contacts in Europe and America. Market development activities will be conducted by the KBS staff with the assistance of volunteer consultants specializing in the nursery stock industry.

Winter Vegetables Strategy

Introduction of new high yielding winter crops, new disease resistant varieties, and seasonal use of protective cropping technologies can increase winter vegetable production. The implementation of special processes to fill the winter period against the importation of seasonal production from the south can be done with proper assistance.

Two basic groups of horticultural crops that have the most potential are the spring-autumn growing crops, including almost all fruit, most vegetables and salad crops and most nursery crops; and those crops, mainly vegetables, able to withstand winter conditions although not necessarily grown throughout that entire period. KBS can help input supply companies to find vegetables that fit the criteria for sale to the farmers. Further, they can provide consultants that can assist the input suppliers to teach the farmers to plant and cultivate these crops using their inputs. Further, basic market development can be done by the wholesalers of such vegetables with the assistance of KBS.

d. KBS Participants include :

- i)** Fruit processors
- ii)** Vegetable processors
- iii)** Equipment suppliers
- iv)** Packaging suppliers
- v)** Vegetable collection & cooling services
- vi)** Horticultural services
- vii)** Produce transportation services
- viii)** Input suppliers for Vegetable and Fruit Production. (farm equipment, farm machinery, cleaning supplies, diesel fuel, farm management services, computer technical services, waste management systems, water and irrigation services, custom field preparation services, seed suppliers)
- ix)** Input suppliers for Vegetable and Fruit Processing. (processing equipment, filling machines, packaging, appropriate technology for vegetable processing, pasteurization equipment, custom stainless steel equipment manufactures, plastics melting manufactures, technical services for equipment repair, distributors of processed products to retail and restaurant trade, chemical supply companies, chemical testing equipment companies, delivery truck sales and services companies, advertising and promotion agencies, package design companies, export certification companies, freight forwarders, export consolidation companies)

- e. **KFS Production support activities (coordinated with KBS)**
 - i) Fruit farmers
 - ii) Vegetable farmers
 - iii) Vegetable and Fruit Wholesales
 - iv) Inputs suppliers
- f. **Fruit and vegetable cluster working group**
 - i) Fruit and Vegetable Association
- g. **Working group activities**
 - i) Market development strategies
 - ii) Trade and investment activities
 - iii) Cluster strategy development
 - iv) Market information
 - v) Price information
 - vi) Dissemination of information on new plant varieties
 - vii) Contract pricing relationships between farmers and processors
 - viii) Collaborative sourcing
 - ix) Food safety and quality

h. Mitigating Constraints on Vegetable and Fruit Sector Cluster Development:

Greenhouses

Rehabilitation projects had been working doing investments in greenhouses, mainly at the family or village level, sometimes in enclaves area and mainly directed to secure a better access to vegetables for local consumption. Swiss project of Horticultural Promotion in Kosovo (Intercooperation/SDC) identified the investments in greenhouses as a good mean to extend the season of production for the Kosovo market. As an indication, the investment needed for good quality plastic greenhouses, distributed in Kosovo and including internal irrigation system is of 18 euros/m² (9000 € for a 500 m² greenhouse). It is also possible to find in the market products of a lower quality, without irrigation system for 5.5 euros/m². The construction of glass greenhouses requires an investment of 40 €/m².

Collecting points

The establishment of collection points is needed for the integration of the fruit and vegetable chain and to secure products that meet the needs of the consumer for freshness, cleanliness, and low prices. Collecting point with packing and refrigeration capacities can be established in partnership with the processors of fruit and vegetables. KBS clients will be looking to investment in packing/selection plants, refrigeration units in production zones and new processing lines.

Packaging material

The packaging material used in Kosovo is mainly imported. For the year 2001, there was a value of 4,921,212 euros in imported packaging material (Institute of Statistics). KBS will be assisting their clients to profitability make in Kosovo some packaging materials not only for fruits and vegetables, but also for other food products, instead of importing them. For example polybags for juice, tin cans for processed fruits and vegetables, packing boxes for fresh fruits and vegetables, yoghurt pots, plastic and glass bottles for juices and milk.

Processing

Currently, all fruit juice packed in Kosovo is using imported fruit concentrate. The substitution of the imported concentrate with locally produced concentrates is feasible if the processor can locate and consolidate sufficient quantities of fruit. The investments in processing have to first take into account the necessity of developing the production of sufficient quantities of the fruit in order to have enough good quality raw materials to justify large investments in equipment. However, there are specialized fruit juices that take a much smaller investment to show a profitable return. KBS will be working with the processors to develop techniques for processing blueberries, blackberries, grapes and other fruits which the processor will be able to sell in smaller amounts.

The following two sections of the work plan are in the process of being developed and will be finalized by the KBS agribusiness team by September 1, 2002. The outline for these sections is provided so that an understanding of a common methodology will be used to complete the work plan.

5. MEAT & LEATHER CLUSTER

- a. Market Situation
- b. Constraint Analysis
- c. Development of a Meat and Leather Cluster Strategy
- d. KBS Participants
- e. KFS Production support activities (coordinated with KBS)
- f. Meat and Leather cluster working groups
- g. Working group activities
- h. Mitigating Demand Constraints:
- i. Mitigating Factor Constraints:
- j. Mitigating Constraints on Cluster Development:

6. SPECIALTY FOOD PRODUCTS

- a. Market Situation:
- b. Constraint Analysis:
- c. Development of a Specialty Food Products Cluster Strategy:
- d. KBS Participants include :
- e. KFS Production support activities (coordinated with KBS):
- f. Specialty Food Product cluster working group:
- g. Working group activities:
- h. Mitigating Demand Constraints:
- i. Mitigating Factor Constraints:
- j. Mitigating Constraints on Cluster Development: